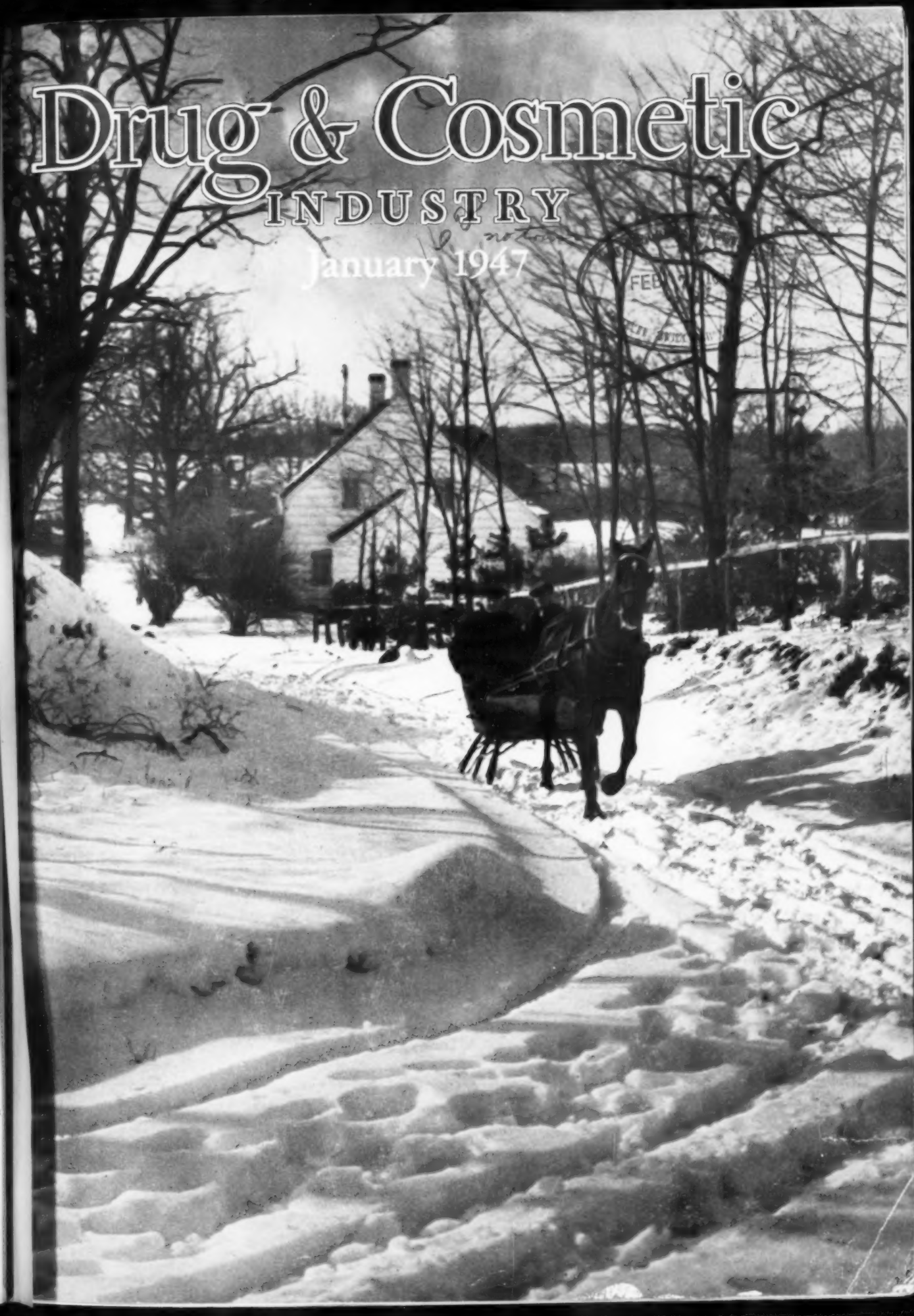
Drug & Cosmetic INDUSTRY

January 1947



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Drug & Cosmetic INDUSTRY

JANUARY 1947

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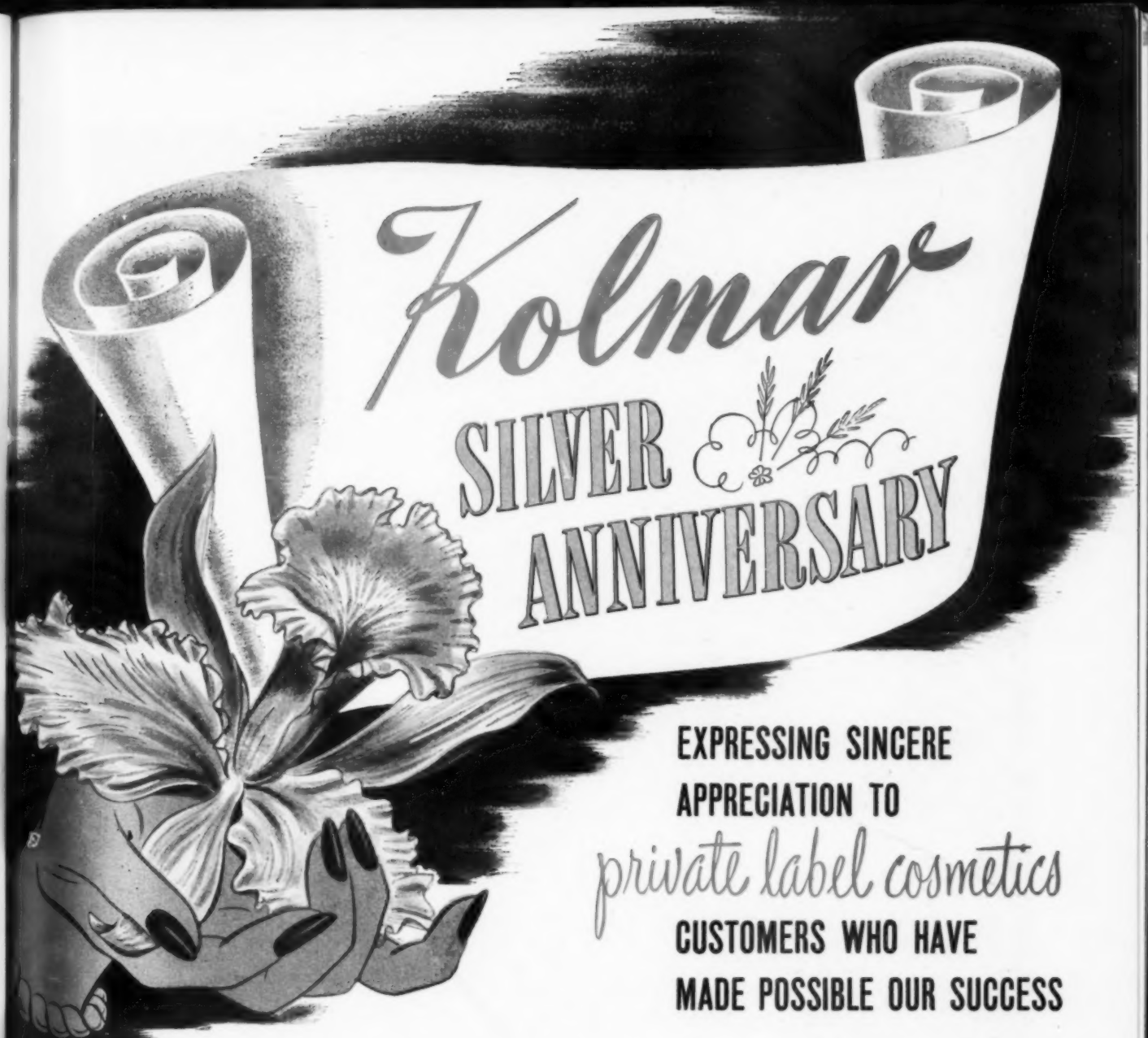

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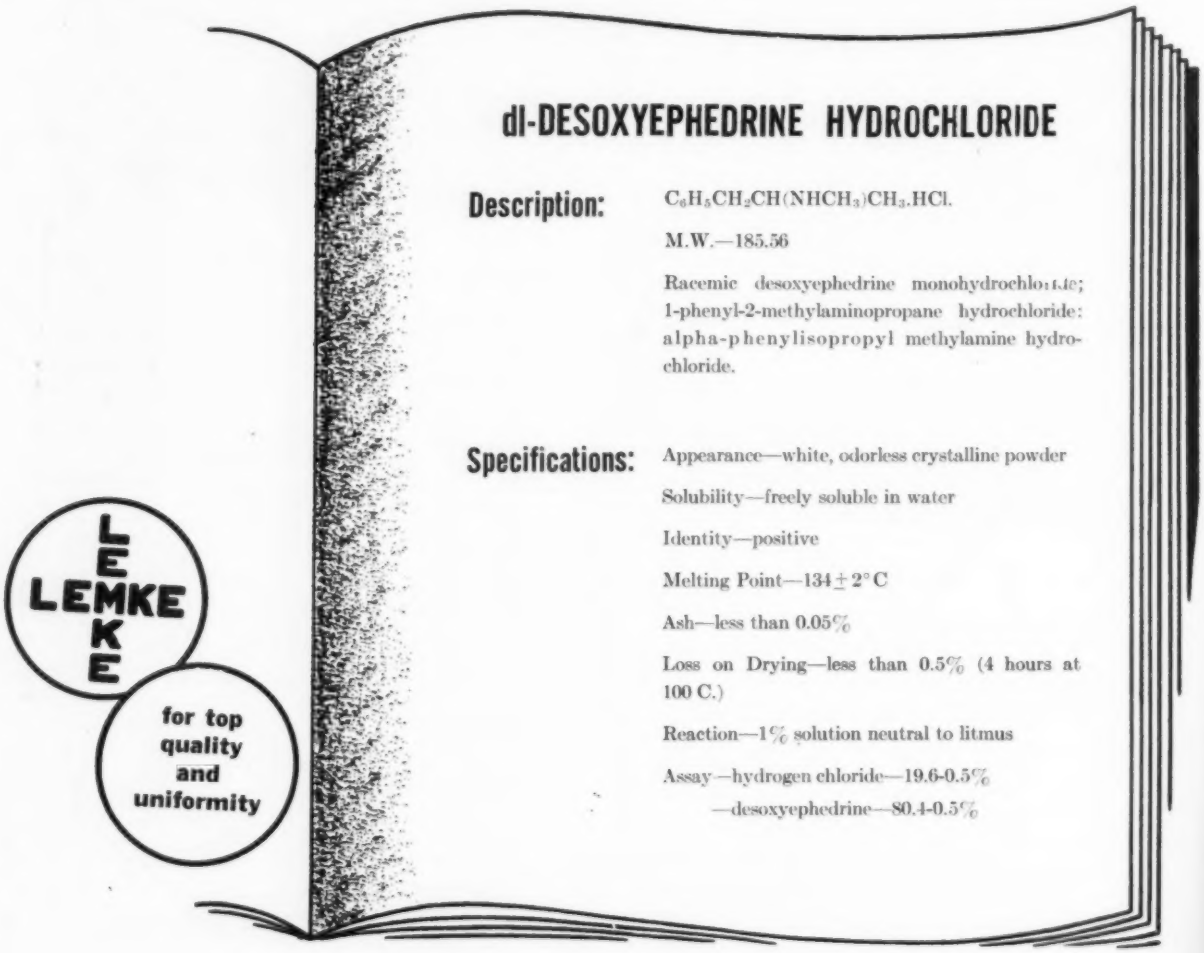

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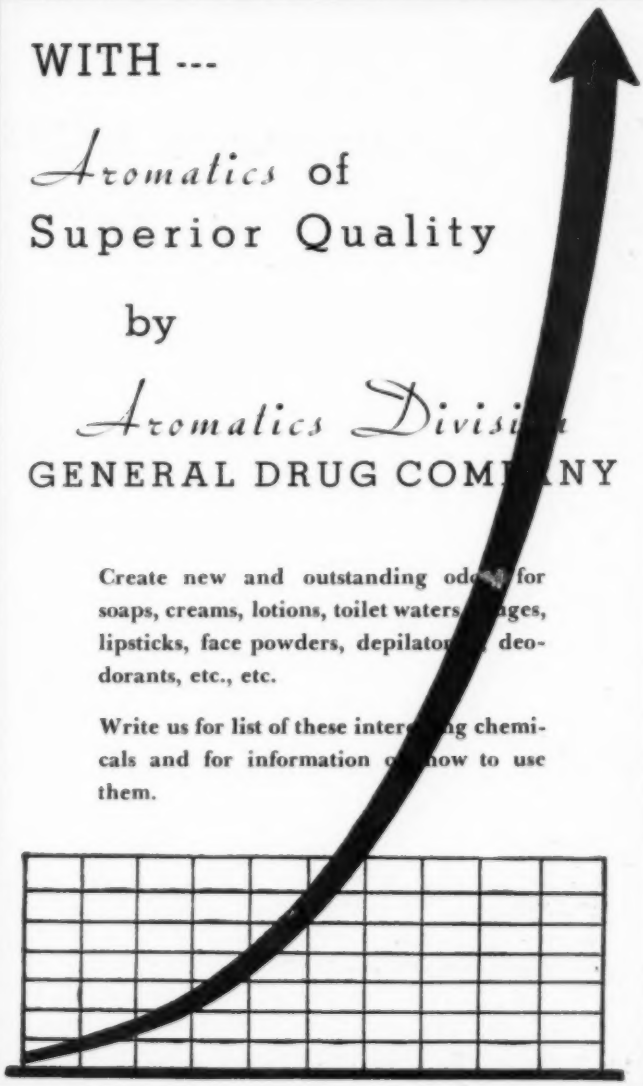

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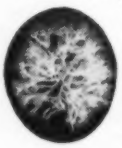

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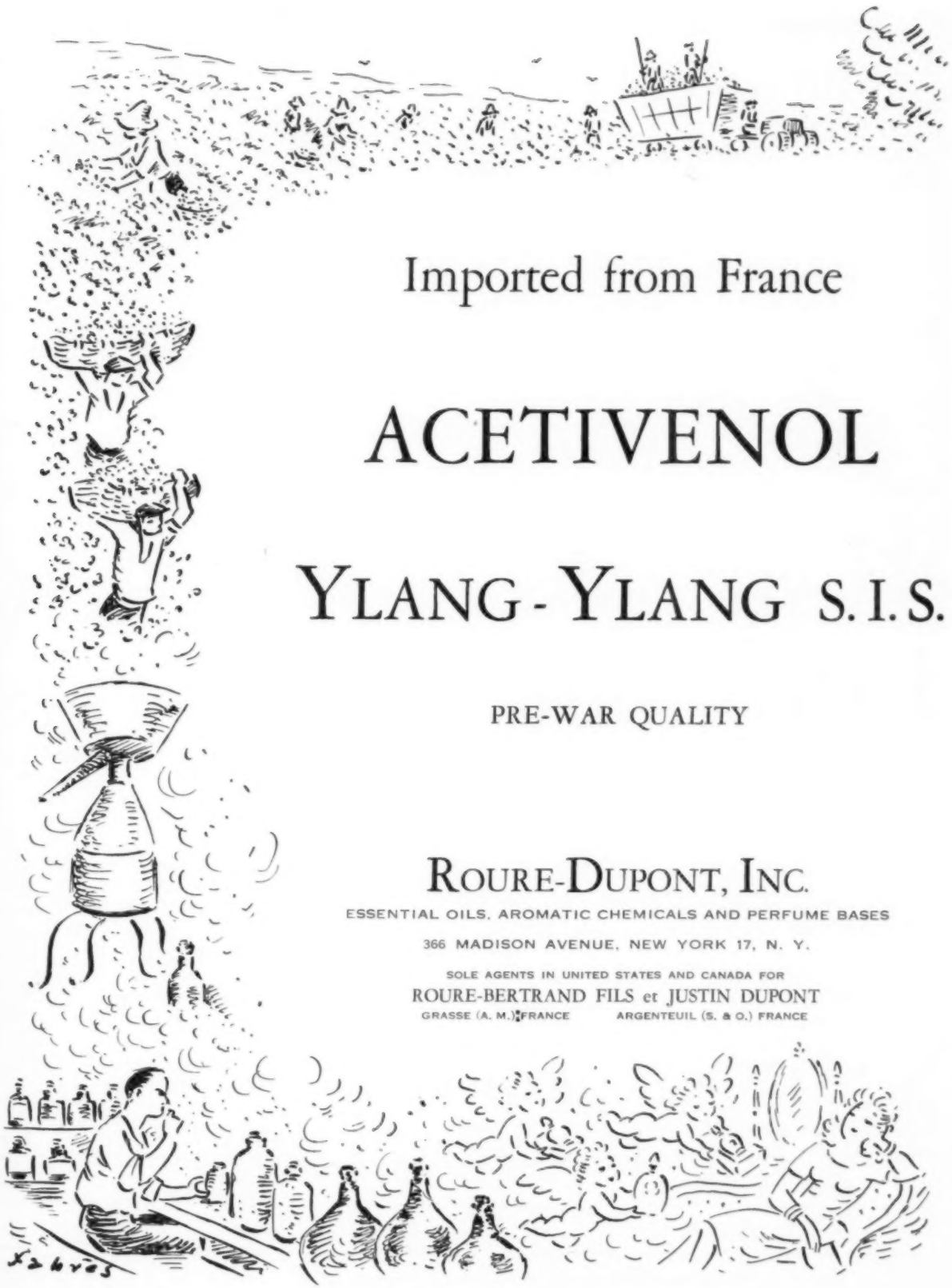

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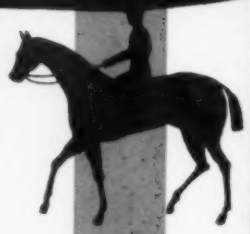

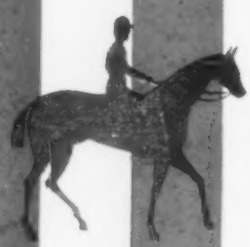

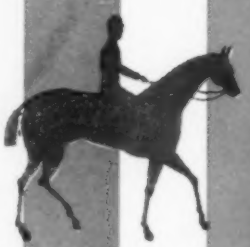

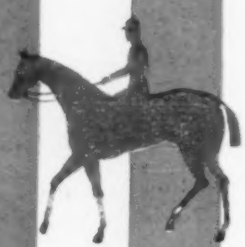

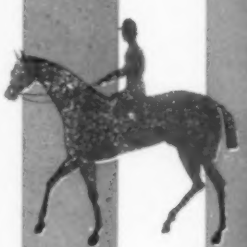

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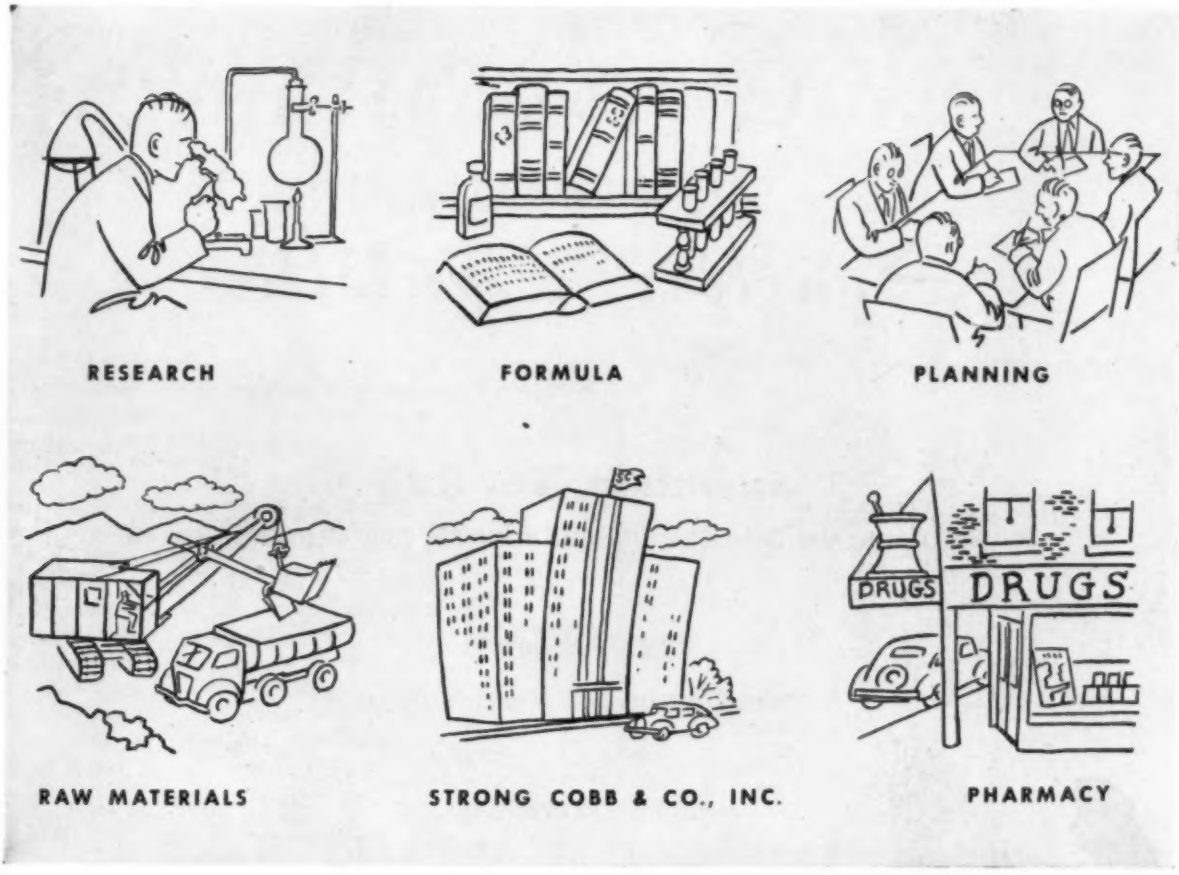

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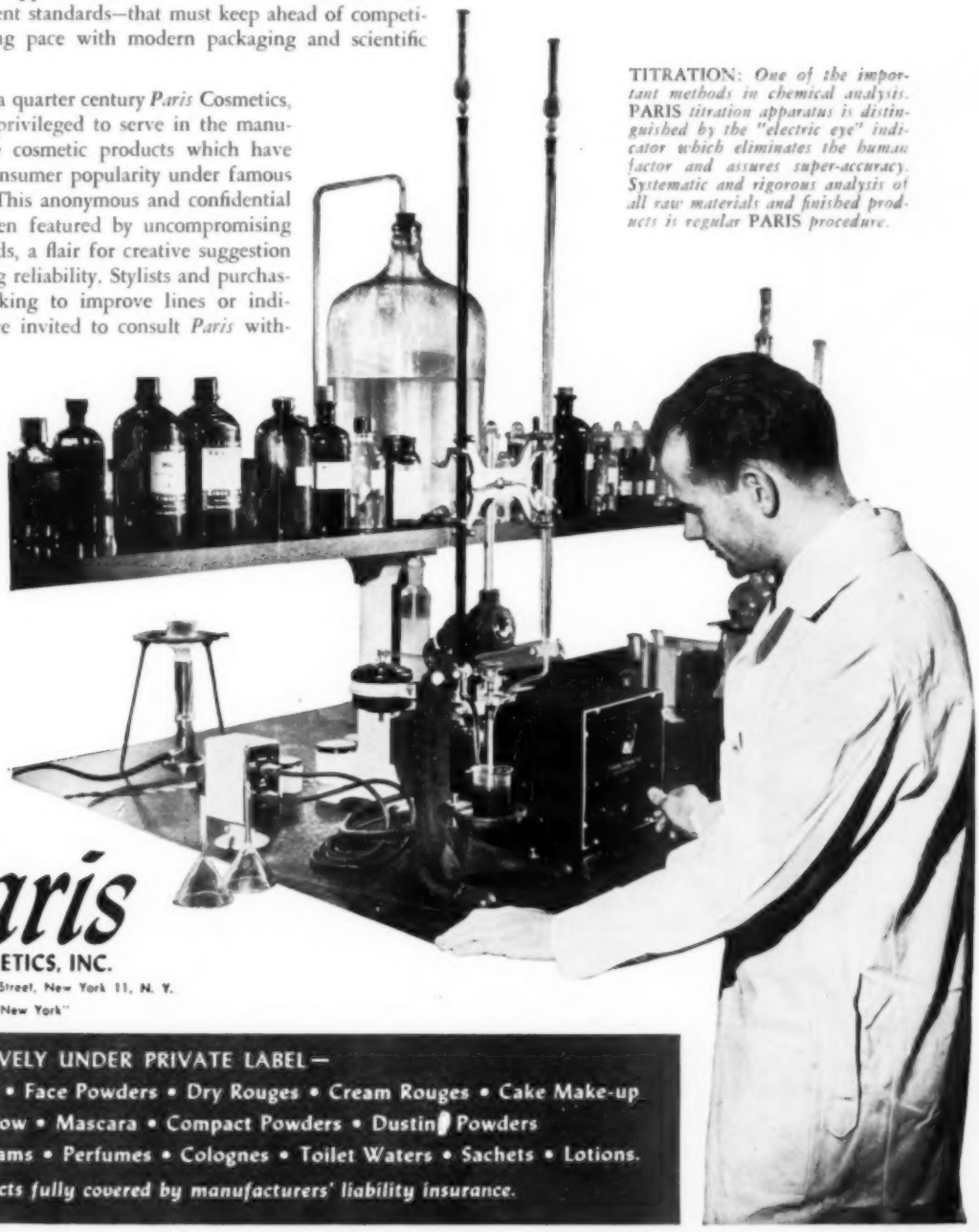

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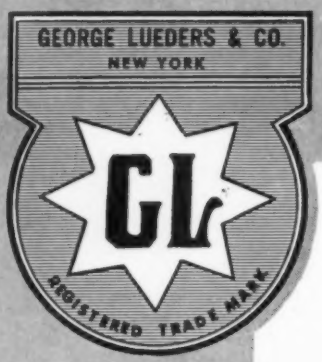

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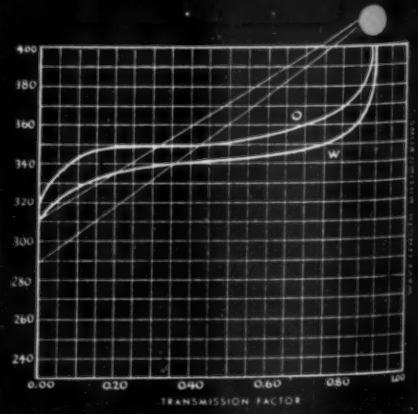

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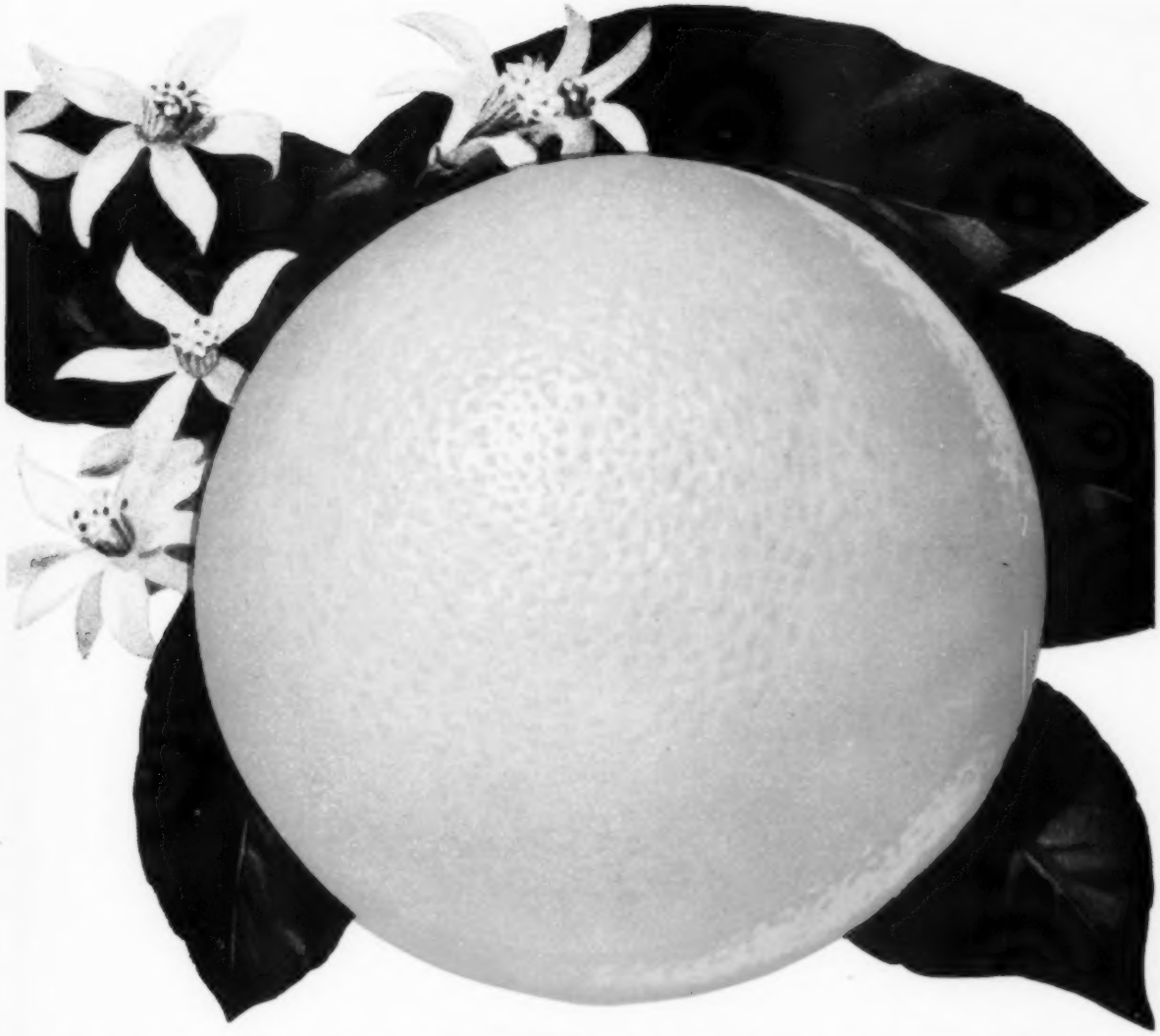

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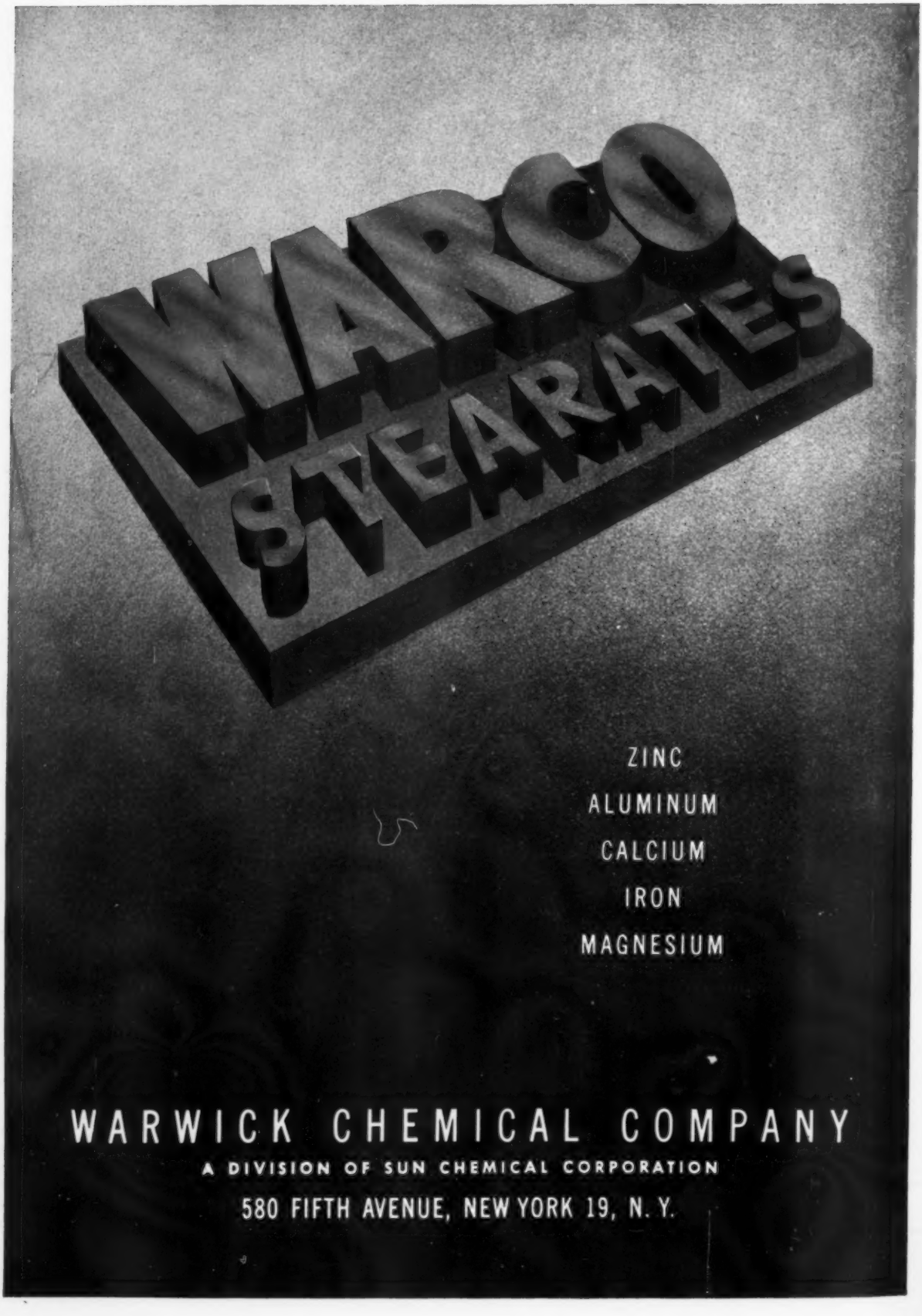
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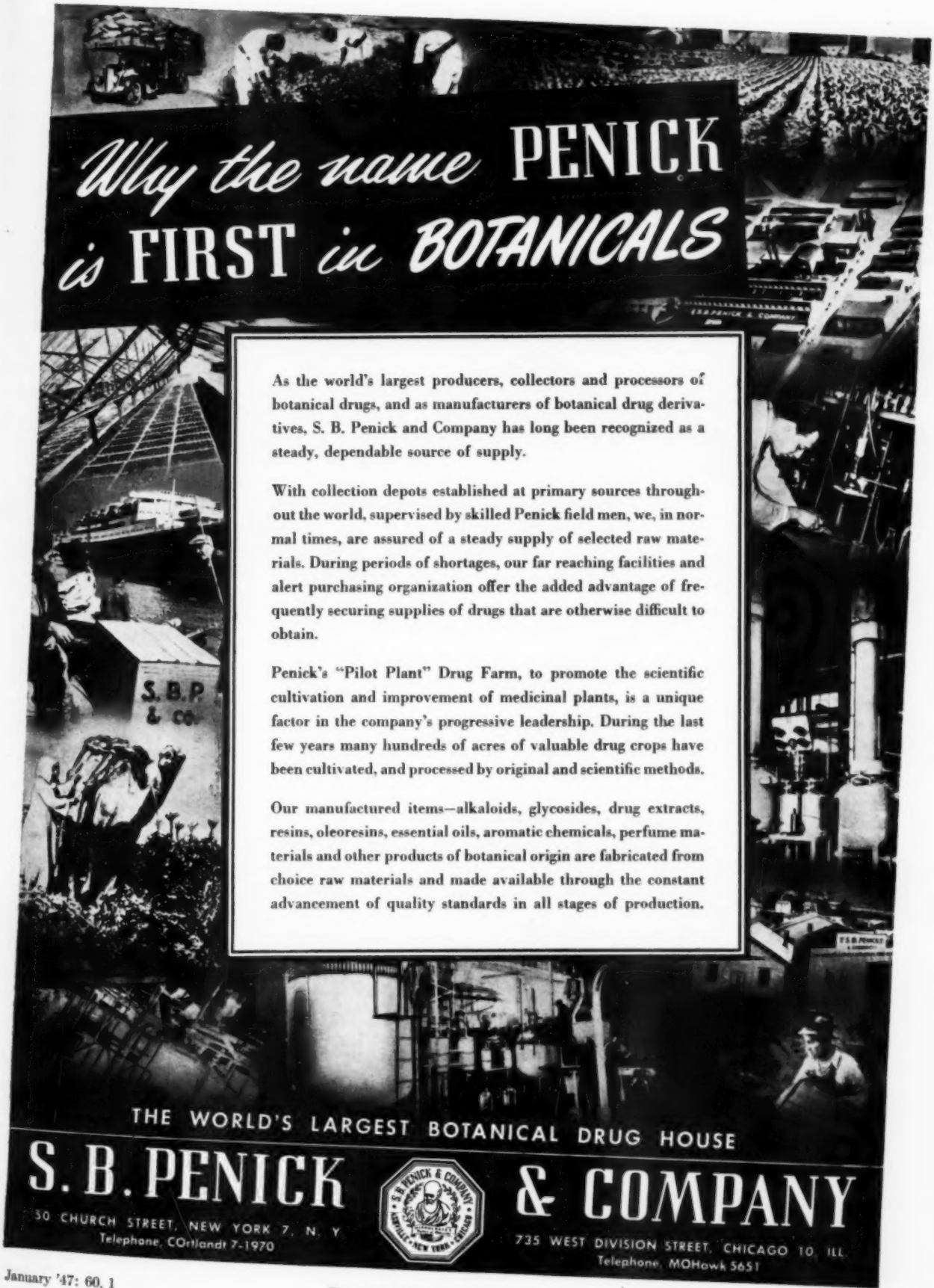
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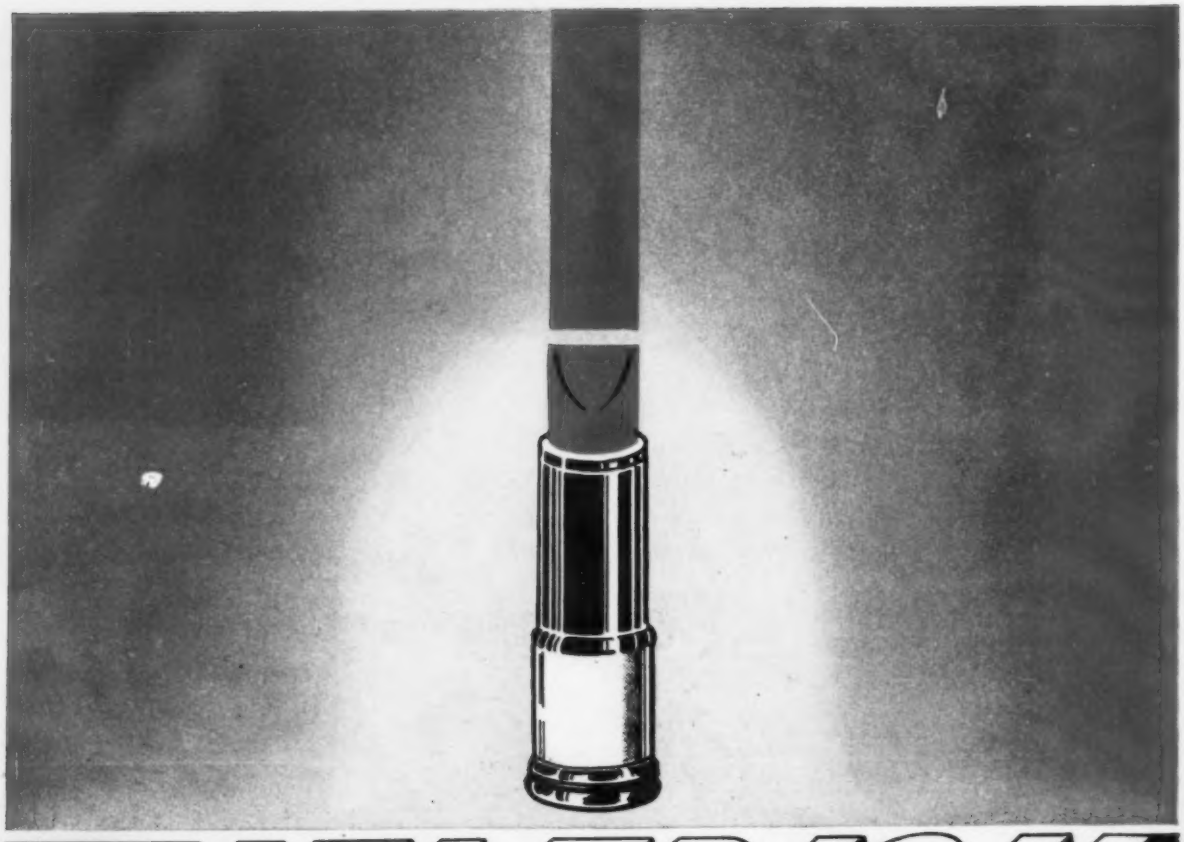

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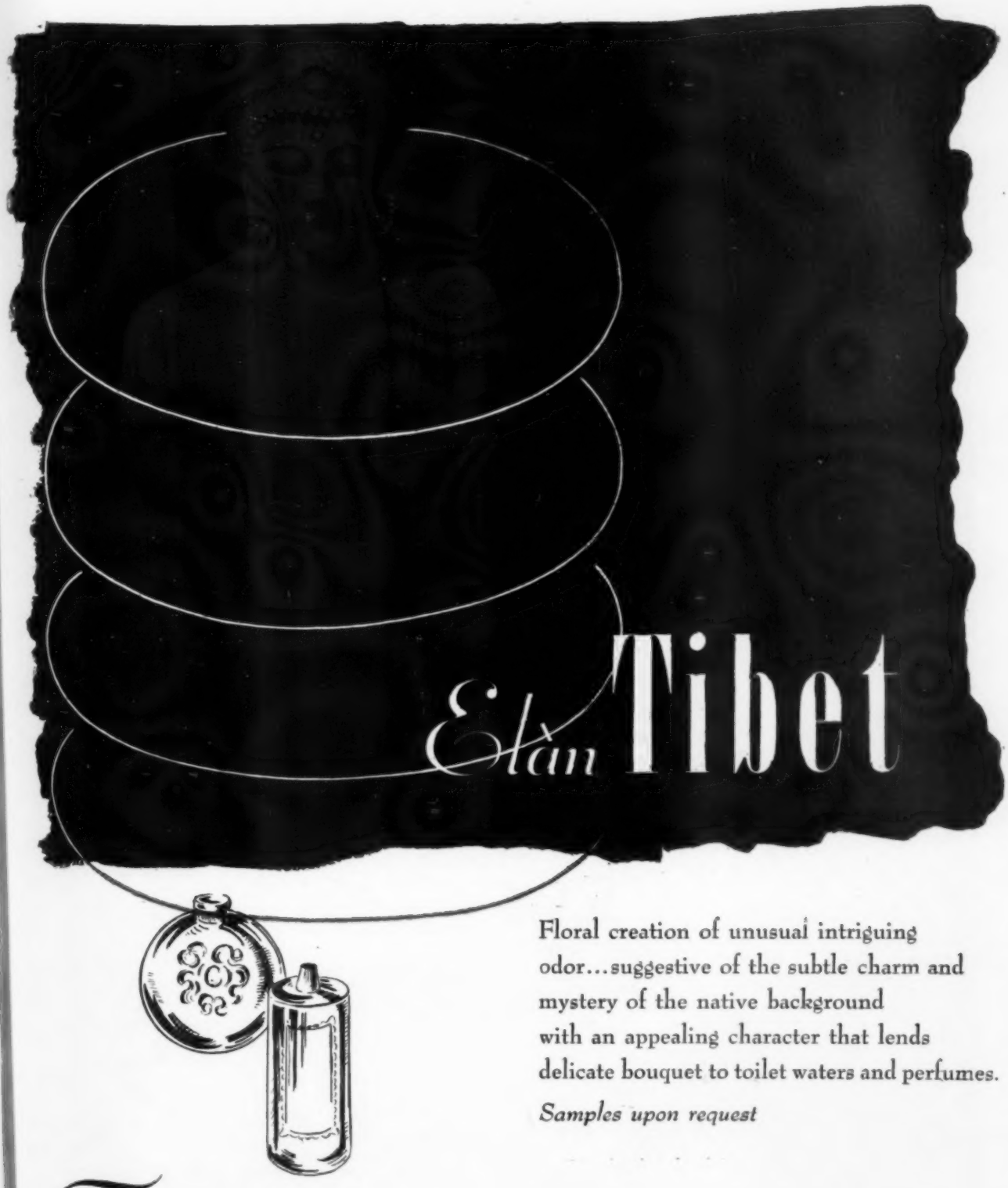

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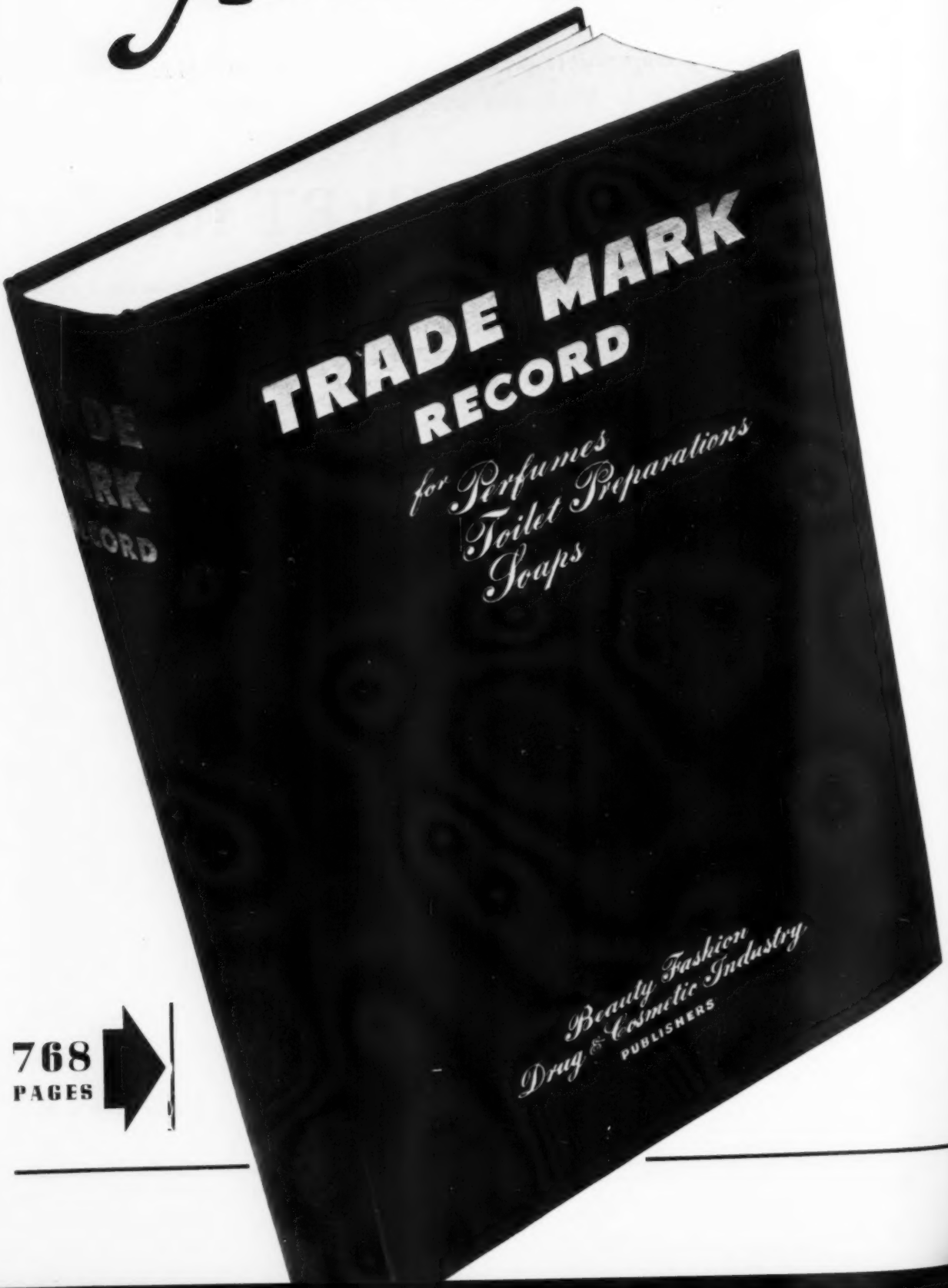

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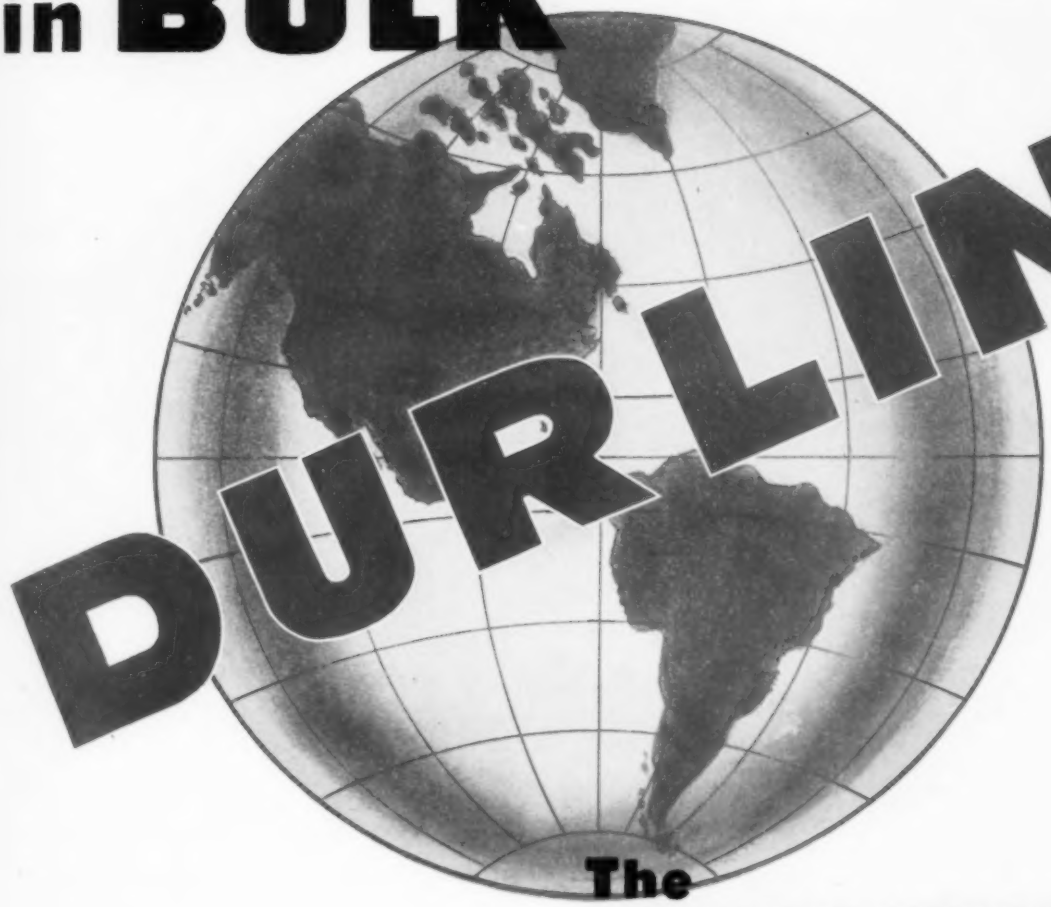

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KEEPING POSTED

Retailers and Anti-Trust Laws

VIOLATION of the anti-trust laws can be charged against retailers as well as manufacturers, in the opinion of Joseph L. Dubow, executive director of the Ladies' Garment Association, who claims that retailers who agree on a common policy in the purchase of goods from manufacturers should be cited for violation of these laws. Mr. Dubow contends that if anti-trust measures are used to curb collective marketing action by sellers, similarly effective bans should be applied against purchasers. As an example of what Mr. Dubow's members are faced with, he, in pointing to the fact that many retailers limited their initial orders for spring merchandise to a small part of what they placed at the beginning of last year's spring season, said that if the stores had agreed on such a joint policy through their buying organizations, they were acting "in direct contravention of the anti-trust laws. "From every social and economic aspect," said Mr. Dubow, "combinations of buyers are just as dangerous and contrary to the public policy as are combinations of sellers."

How right Mr. Dubow is, and how well this industry knows it.

Sex Hormones Give Cancer Relief

DESPITE all the talk about the estrogenic hormones tending to cause cancer, particularly in the small concentration in which they are applied in the estrogenic creams, a report now comes of the beneficial effect of sex hormones, both male and female on breast cancers in women. The report was made to the American College of Surgeons last month by Drs. Frank E. Adair, of New York, and Ira. T. Nathanson, of Boston. Dr. Adair is president of the American Cancer Society. They claimed no positive cure, but stated that two women over 70 years of age have lived more than a year with their cancers apparently gone. Estrogen, generally effective only in cases of women above 60 years of age, influenced a reduction in the mass of cancer affecting the breast approaching a state of total elimination of the disease, in company with other beneficial results. However, they stressed that there was no positive assurance that a permanent cure had been effected or that a tosterone-treated cancer of the bone might not ultimately "splash over" into the form of cancer of the tissue. Testosterone, administered in large doses over a twelve-week period through injection or subcutaneous implantation, quickly relieves pain from cancer of the bone, deposits a callous or bony substance over the destroyed areas of bone, and often enables a bedridden patient to be back at work within a month.

A. C. S. and A. I. C. To Merge

THE American Chemical Society and the American Institute of Chemists plan to consolidate on or about May 1, 1947, the Institute becoming a division of the ACS under the title of The Institute of the American Chemical Society. The plan, although approved by the top officials of the Institute, must be approved by a ballot of the Institute's more than 2,000 members. It is proposed that the Institute become a professional division of the ACS in the hope that as a constituent part of the larger organization, it can accomplish more for the chemical profession. Dr. Snell, president of the Institute points out three benefits that will accrue from such a consolidation: 1. Eliminate duplication of effort; 2. Permit better coordination of activities, and 3. Increase influence, thereby leading to a) an extension program; b) greater effectiveness; and c) enlarged support as evidenced by enrollment in the division, all which should result in A) more accomplishment, and B) lower unit cost to divisional members.

A Strenuous Year Opens

AS 1947 opens we find great enthusiasm on the part of practically all business men and a new willingness to get to work to maintain their business volumes. Not since before the war, has the same spirit existed which is evident on all sides today. During the war years business just rolled in and the principal problem was one of supplies of raw materials and packaging materials and the allocation of available output to customers. While the problem of adequate supplies of raw materials and packaging materials still looms large in certain instances, manufacturers now feel that the era of a sold-out condition is about at an end and that emphasis must again be placed upon merchandising

and sales activities if volume of sales is to be maintained or increased. This is a welcome condition, but we still wonder how many of the salesmen in this and other industries are going to redevelop their selling technique after they have not practiced it for so many years. Then again there are salesmen who started with the sales forces of manufacturers in this industry during the war years of a sold-up condition and they have never known anything but allocation of available supplies and have never really sold under competitive conditions. It is going to be difficult for many to get back to the old routine of making the class and beating the bushes for business, but it won't be long before it must be done or the jobs will go to others who will do just this.

Spell This One Backwards

WE THOUGHT that we might go on for some time with the subject of names of drug products which can be spelled backwards like "Serutan," and "Nemow," but we are afraid that we have been stopped dead in our tracks by one that tops them all. Lawrence Templeton, of Oak Park, Illinois, is responsible for the one that has stopped us. We give it in his own words:

"A contraceptive jelly has been marketed on the West Coast for about twenty-five years under the trade name of 'Dykon'. Spell it backwards and see what you get. If it doesn't come to you at once substitute an 'i' for the 'y'."

Practice Conference for Drugs

THE Federal Trade Commission, of all things, is considering a trade practice conference for manufacturers of drug products. How the devil could the FTC arrive anywhere in such a conference with the multitude of different preparations for all manner of diseases, some advertised to the public, some advertised only to the medical profession, different rates of discounts to various types of outlets, some sold over-the-counter, some sold only on prescription, some involving free goods, and all manner of differences in all phases of the products? There are so many different branches in the manufacturing drug industry that there are three different associations representing them. However, the FTC will doubtless hold such a conference if it wants to. And the rules that it drafts as a result of such a conference will be used as a club to bring manufacturers into line with the wishes of the Commission. And if a particular manufacturer does not follow the rules, he will be worried to death until he falls in line or goes bankrupt.

Barbiturate Control

A BILL is before Congress to place control of barbiturates under the Federal Narcotic Bureau. Similar bills were pending in the previous Congress but were not enacted. While it is quite generally agreed in this industry that barbiturates should be under rigid control, manufacturers do not see why these preparations should be placed in the Narcotic Bureau believing that control by the various States would be more desirable. The terrific details required by the Narcotic Bureau would make for a much higher selling price of these products all along the line. The control as set up by New York and other States leaves nothing to be desired in the matter of control of these preparations.

Export and the Food and Drug Act

THERE are rumors of an amendment to the Food, Drug, and Cosmetic Act which would prohibit the shipment to foreign countries of products which do not fully meet the requirements of the Act for goods for domestic consumption. This would mean that if a foreign country had requirements different from ours and believed that products meeting these requirements were perfectly proper for the people of this country, we could not ship them what they wanted, but on the contrary, they would have to take what we deemed was proper for them to use. This is a fine way not to build up foreign trade, which we are told we must do to make the world a happier place in which to live. Certainly, Great Britain, Germany, France, the Netherlands, Switzerland, and other exporting countries will ship what they want, whether these preparations are used at home or not. Certainly these foreign countries have physicians, public health officials, and others to look after the standards of their preparations, and in most of the countries these people are quite active in protecting their citizens against substandard products. But, as usual, we must look down our noses at them and tell them that they don't know what they are doing or what they are talking about, that we know it all. It is about time that we started to have some respect for other people's opinions. Maybe when we do that we will really be able to build up a real foreign trade. As is well known, many of our leading houses are erecting plants in many foreign countries. Certainly the products coming out of these plants are prepared and labeled only in accordance with the requirements of the countries in which they are made. Such an amendment would give the companies with foreign plants a nice head start over the companies who try to export the finished products and would drive more of our companies to discontinue manufacture of export products here, and arrange for manufacture and finishing of these products in the foreign countries in which they are to be used.

Portal To Portal in This Industry

THE matter of portal to portal pay, which has raised so much excitement throughout the country, is being brought up to the drug and pharmaceutical manufacturers in many cases where the employees of these firms are unionized. The employees, through their unions, are asking for pay for the time that they enter the plant until starting time. This is when they walk to their departments, change their clothes, perhaps visit the men's room, probably pass a little time with some buddies talking about the baby, the new house, the wife's condition, or any number of other things, get to their definite place of employment and get things ready for the starting time. Why they don't demand pay from the time they leave their homes is more than we can fathom. However, if the Government of this country can possibly do anything to outlaw these suits for so-called portal to portal pay, we can rest assured it will be done.

Larger Shipping Units

A DIFFERENT method of shipping, with larger unit loading is forecast by John D. Sheanan, secretary-treasurer, Drake, Startzman, Sheanan, Barclay, Inc., who said recently that the first and most significant development in storage and handling is unit loading made possible by the lift-truck-pallet combination. "I am thoroughly convinced," said Mr. Sheanan, "that in one form or another, most of the big national distributors will, within the next few years be shipping all their standard commodities in unit loads of from 1,000 to 3,000 pounds.

"This development will attract most attention in the grocery trade. Canned goods, bottled goods, liquors, soap, cigarettes, cereals, and dozens of other items, will be made into unit loads at the end of the production line and will be maintained as units until they reach a point where the order for delivery is less than a full unit. This means that they will go through the several phases of distribution—shipping, warehousing, reshipping, and possibly warehousing again, without ever being broken down. The individual carton will cease to exist as a handling unit until the ultimate point of delivery."

A natural development of such a plan is the standardization of pallets for pallet pools, several of which, according to Mr. Sheanan, are in the making. "A pallet pool," he says, "is similar to any other arrangement by which one centralized owner rents his equipment for use to many others and recaptures it as soon as it is released from usage by the renter. In practice, it becomes somewhat complicated due to the very close control that must be exercised over the inventory, location, and usage of pallets."

Seems to us that sales managers of finished goods are going to have on their hands a problem similar to the returnable drum problem that has long bothered the sales managers of firms supplying them with many of their raw materials.

Brooks Returns To Industry

IT IS pleasing to welcome back to an active status in this industry Herman L. Brooks who announced this month the purchase of the business of Alexandra de Markoff. Mr. Brooks, who has not been affiliated with any company in the industry since his recent resignation from Coty, has also been elected president of the New York Board of Trade for the current year. Doubtless, although he will be extremely busy in his new enterprise, Mr. Brooks will find time to continue his long record of service to the entire industry.

Watch for Tariff Changes

IN THIS issue we publish an article telling about the objections of many manufacturers of aromatic chemicals to the lowering of the tariffs on the products which they manufacture. The threat of lowered tariff imposts on all sorts of products manufactured in this country are part of the reciprocal trade agreement plan which would greatly increase international trade and, supposedly, improve international relations, thereby aiding in reducing international friction and the likelihood of wars. Tariffs can now be lowered quite considerably, for under the Trade Agreement Act of 1945, the tariffs, which have already been lowered by 50 per cent from the 1930 levels, may be cut an additional 50 per cent without specific sanction of Congress, making a net reduction of 75 per cent. Some eighteen countries have been invited to Washington to participate in the largest reciprocal trade agreement negotiations ever undertaken by this country. All the products manufactured by drug, cosmetic, and allied manufacturers will come up for discussion and no one can tell in advance just how many products of this industry will have lower tariffs. Likewise of the raw materials and containers used by this industry will come up for discussion. In the case of the aromatic chemical manufacturers a brief has been filed protesting against reduction in the traiffs on these products and in this move these manufacturers are backed by customers, the perfume and cosmetic manufacturers of this country.

Advertising Allowances and Trading Areas

APPARENTLY the Federal Trade Commission in enforcement of the Robinson-Patman Amendment considers the country as one trading area in which all sellers of all types of merchandise are in direct competition with one another. At least this seems to be the attitude of the Commission with regard to advertising allowances. This aspect of the situation was recently revealed by Edwin Feldman, director-counsel for the National Association of House Dress Manufacturers. Heretofore, he said, manufacturers, selling on a franchise system to one or possibly two retailers in a town, granted advertising allowances on the theory that the stores getting them were not in direct competition with retailers in other localities who did not receive the allowances. However, a check with the Commission revealed that officials there do not subscribe to such a theory, but feel that failure to grant advertising allowances to all alike may be considered a violation regardless of the location of the purchasers.

Therapeutic Research Foundation

THE Therapeutic Research Foundation, Inc., a new non-profit drug research organization, have been established under the laws of New York State for the scientific study and investigation of medicinal products the announcement states that:" The Foundation will prepare reports and disseminate the results of its studies to the end that technical and scientific information in respect to therapeutic agents may be further developed and expanded." Dr. R. A. Cain, since 1937, director of the Control Division of Sharp & Dohme, which position he resigned to join the Foundation, has been elected president and scientific director of the new organization. Harvey Bernhardt Haag, one of the country's outstanding scientists, has been named chairman of the Foundation's Research Advisory Committee. Dr. Haag is a Professor of Pharmacology in the Medical College of Virginia and a fellow in the American Medical Association. S. Barksdale Penick, Jr., is chairman of the Board of Directors of the Foundation, and other officers are Lupton Patton, vice-president, Charles Pinkham, secretary; and Floy F. Johnston, secretary.

Price-Cutting in Pharmaceuticals

WITH reference to price-cutting in the pharmaceutical field, Dr. Carle M. Bigelow (Calco Pharmaceutical Department) did not mince words when he told the members of the American Pharmaceutical Manufacturers' Association the following at their midwinter meeting:

"I have been amazed to learn of the amount of time wasted in discussion between sales management and salesmen at individual company sales meetings, as to competitive prices. An automaton can sell goods at a cut price. A good salesman sells the quality of his goods, the preciseness of controls, the reputation of his house, and *not price*. Many of you spend large sums in pharmacological and clinical testing and publication of scientific papers on drugs of the nature I am discussing, in order to place their value in the minds of the medical profession. You make an investment which requires that you have a proper markup. Then, however, an irresponsible concern, often with no control, no investment in pharmacological and clinical work, no reputation with the medical profession, invades the market with a cut price, which you promptly meet, as soon as you learn of their price in the market. This is not sound merchandising; and, to be brutally frank, it indicates a lack of proper intestinal fortitude on the part of your sales organizations.

"It is my honest opinion that we have a disease of 'super-price-consciousness' in the pharmaceutical industry, today, that is causing many valuable products to be treated as competitive products rather than as specialties; and that this represents a serious trend extent in our industry, which will sap the life blood of any progressive industry; failure to realize adequate profits. This is a problem which each of you must think through and solve individually . . . Clear out of your minds the dread virus that profits are anti-social. Adequate profits are the life blood of industry, and the bulwark not only of our economy but of our entire social structure."

Luckman and Labor Problems

CHARLES Luckman, president of Lever Brothers, is attracting much attention with his views on methods of solving the labor strife in this country. Recently, Mr. Luckman stated that the proposed new labor laws will not solve the present struggle between labor and management because they all strike at the symptoms of the conflict and not at the cause. Instead of punitive, hasty labor-legislation, Mr. Luckman recommends an exhaustive Congressional study to determine the basic principles of industrial peace. According to Mr. Luckman, "we must not permit ourselves now to be divided by civil strife, for if two such great forces as Labor and Management engage in a struggle for dominance within the highly intricate mechanism of the American economy, neither can win and Democracy is bound to lose. Both will go down together in the resulting chaos, or in the regimentation which will result from the public demand to avoid that chaos. Free Unions, Free Management, Free Enterprise, and a Free Society will either survive or go under together."

After criticizing the "social irresponsibility" of management, Mr. Luckman suggested that much of the blame for today's conflict can also be laid at Labor's door for demanding conditions which unions have not been able to grant to the people who work for the unions themselves. Even these men who have "professionalized their social consciences are not able to achieve for their own employees the meillenium of freedom from economic fear, want, and insecurity by merely pressing a button. The failures of both labor and management should occasion less name-calling and more sanity and moderation at the bargaining table."

Mr. Luckman said that the countless Congressional committees which have studied the labor problem had all studied the causes of labor war, not of labor peace. There are, he stated, hundreds of case histories of successful and peaceful labor-management relationships, and he urged that Congress establish a tripartite Commission for the Study of the Causes of Industrial Peace.

Discussing "Labor's Glass House," Mr. Luckman pointed out that unions are now "Big Business" with 14,000,000 members, and 110,000 paid employees. With reference to this he said:

"Labor, as an employer, does not have the exemplary record which might be expected from such a vociferous advocate of social improvement. The fact is that as employers, labor leaders exhibit most of the conservative characteristics of their fellow executives on the management side of the fence, with the result that there are pretty big discrepancies between what they say and what they do."

Air Disinfection and Colds

THE U. S. Public Health Service has taken a crack at claims that colds and other respiratory ills can be banished by disinfecting public places. Dr. R. E. Dyer, National Institute of Health director, has come to the conclusion that installation of equipment for treating air in theaters, shops, factories, and offices is not warranted by present information. Well it seems that this will be just another of those controversial subjects such as whether or no vitamin A is beneficial in the prevention of colds. Reports will probably be issued on both sides, techniques and methods will be improved, and a final answer will probably never be made because in the meantime some other method of preventing these diseases will be promoted.

Salesmen's Union Difficulties

AND speaking of unions and their activities, the Salesmen Union of the CIO has been causing some trouble to some of the companies whose salesmen they have organized. A while back, the salesmen of Schieffelin & Co., went on strike and the company was picketed at its headquarters in Cooper Square, New York. What happened? Some other unions refused to cross the picket lines and a great deal of goods could not be taken in or out tying up

the company in nice shape. A union of salesmen might not seem so bad at first thought—although it is bad enough—but when it is realized that it can completely tie up a company in all its branches, the real effects of such unionization can be fully comprehended. Another manufacturer whose salesmen are organized in this same union recently dismissed one of their salesmen for activities involving the sale of a drug store. The union demanded arbitration. The arbitration was held and the salesman must be out back to work and paid an undetermined amount of money for the time that he was unemployed as the result of what the arbitration determined was an unwarranted dismissal.

New Squibb Sales Policy

E. R. SQUIBB & SONS have simplified their sales and discount policies beginning this year. Gone are all the special deals and special discounts on various types of products which made their price list so complicated. Instead is a straight discount policy applying alike to everything in the line. Case lots are sold to the wholesaler at 16½ per cent off the price to the retailer. If the wholesaler turns these goods over to the retailer in case lots, he makes a profit of 16½ per cent on the transaction, but if he sells to the retailer in smaller lots he makes profits that might run up to 30 or 40 per cent depending upon the circumstances. All Squibb executives and salesmen are extremely enthusiastic about the plan, anticipating greatly increased sales as the result.

Capons by Chemistry

AS EVERY housewife and every chicken-raiser knows, capons bring more money per pound than other types of chickens. This is partly for the reason that poultry don't like the job of caponizing, and then the mortality is high. But now Maxwell L. Cooley, chief chemist of General Mills plant at Rossford, Ohio, is accomplishing the same result without surgery, by simply feeding the roosters a few doses of one of two synthetic female hormones —diansyl hexane, or dimethyl ether of diethyl stilbestrol. Under this treatment, the rooster's shrill crow turns into a weak falsetto and he loses his comb and his strut. And much more to the point, his flesh takes on the succulence of real capon meat, and he grows to six to ten pounds.

The only trouble with this method at the present time is that the Food and Drug Administration will not allow the meat to be shopped in interstate commerce, claiming it is afraid that the caponizing process does not stop with the rooster. Cooley poo-poos such talk, saying that General Mills male workers who have eaten the synthetic capons (they do not eat the liver, gizzard or heart) are still plenty virile. But FDA wants proof, and until it gets it, General Mills probably won't put the special feed on the market.

Cosmetic Tax Must Go!

WITH President Truman's announcement of the end of hostilities as of December 31, 1946, it would be exactly six months, or June 30, 1947 before any relief would be obtained in the Federal retail excise tax on cosmetics. And at that time the tax would not be completely eliminated, but would merely be cut back to 10 per cent instead of 20 per cent. Despite the President's statements that these taxes must not be eliminated, it is up to the manufacturers in this industry to fight tooth and nail to have this tax completely removed—not cut back to 10 per cent—and at once. If this is not done, the cosmetic industry will suffer to a very material extent by a decline in sales. The jewelry and fur industries have already been all but wrecked as a result of this tax of 20 per cent at retail, and the cosmetic industry is in no better position to hold up under such an unfair impost. It stands to reason that purchasers of gifts—which account for a high percentage of the purchase of cosmetics—are not going to buy something for a friend or relative that bears a 20 per cent tax since the value of the gift in the eyes of the receiver does not take this tax into account. A giver of a gift with a certain amount of money to spend on the gift, wants to get the most value for this amount of money, and taxes paid on the purchase of an article do not represent value. This situation is the most serious problem facing the cosmetic manufacturers of this country and all problems pale into insignificance beside it. No effort expended to eliminate this tax can be too great for a manufacturer to expend.

The Glycerine Situation

GLYCERINE still remains a scarce item and prices continue to be quoted at high levels compared with previous ceiling prices. During 1946, demand was estimated at 230,000,000 pounds, but production only reached a total of 155,000,000 pounds. However, during 1946 the OPA allowed glycerine to be imported at prices above the ceiling prices, and as the result of this action, world prices, paced by Argentina—the main source of supply—rose very rapidly from 24 cents to 86 cents per pound for the refined material. But imports alone were not sufficient to balance supply and demand. but they were of the greatest importance in helping industry, to operate. Drawn from all over the world, approximately 23,000,000 pounds entered this country, a total equal to that of the entire war period, and the largest amount since 1929. With the exception of the three week period in July when we had temporarily price decontrol, foreign buying continued until November 10, when abolition of price ceilings caused buyers to withdraw from world markets.

For five years glycerine prices were under ceiling and when decontrol permitted free trading the reaction was immediate. Everybody wanted glycerine, the first few days price was no object with refined glycerine selling up to 85 cents per pound. The "Big Three" refiners, however, announced their prices for refined at 55 cents per pound for tank cars, and after they had booked large quantities at this level, the market exhibited a downward tendency. At the end of the year most of the large consumers, having covered for several months, were not anxious buyers with the result that prices have declined to 65 cents for refined, with the "Big Three" still quoting 55 cents per pound. It appears that the worst of the glycerine shortage is behind us, and production for 1947 is expected to be at least 25,000,000 pounds above that of 1946, although imports are estimated at 8,000,000 to 10,000,000 pounds less than 1946.

DR. JAMES J. DURRETT

DOES THE F.T.C. CONTROL DRUGS?

DESPITE the fact that the Federal Trade Commission is supposed to have turned over a new leaf as the result of one decision written by Commissioner Lowell B. Mason, recently added to the Commission by President Truman, the actions of the Commission in other respects do not indicate that it feels any differently about the agressive and unfair use of its powers than it did before the possibility of some such legislation as the Reece Bill threatened it. For in a current case involving advertising claims of two similar proprietary drug preparations, the Commission is running the defendants around this country for the taking of testimony at a rate that could easily force the smaller of the two companies into insolvency if continued. From a study of this situation it is easy to see how the commission is able to get companies to sign stipulations even though the companies, in many instances, might honestly believe that their claims are right and proper.

It is an old trick for a Government agency to force a small company to spend in its defense so much money that it must either give in or go broke. What difference does it make to the Government agency how much Government time and money are spent on such a case, since it is not the agency's money or the money of any of the individuals working on the case for the Government? But before this industry throws its arms around the Commission and thinks that all is going to be rosy because a newly appointed commissioner, in an effort to block legislation which would properly restrict its powers, writes one decision favorable to industry, then tells the President that is anxious to embark on a new program of cooperation with industry and *gets more money from Congress in the process*, it should look at the record.

We do not think that the leopard has changed its spots. We well remember many long years ago before the enactment of the Wheeler-Lea amendment to the Federal Trade Commission Act when the Commission was trying to stop the advertising claims made by the reducing preparation Marmola. Marmola contained thyroid and was properly considered a dangerous product when indiscriminately used. But the Supreme Court of the United States ruled that the Commission had no jurisdiction in the matter because all the competitors of Marmola made similar claims and therefore there was no unfair competition involved. Did this stop the Commission? Not on your tintype! The hell with due process of law, said they, we bureaucrats will work together to accomplish our ends. So another bureau with autocratic powers, the Federal Communications Commission solved the problem for the Federal Trade Commission simply by refusing to renew the licenses of those radio stations throughout the country who sent Marmola commercials over the air. Just as simple as that!

Remember, too, that the Federal Trade Commission's man on control of advertising of drug products is none other than Dr. James J. Durrett, the man who was branded as a "therapeutic nihilist" when he was Chief of Drug Control of the Food and Drug Administration

many years ago. We do not know how even Dr. Durrett could be a "therapeutic nihilist" today in the face of the developments in therapeutic agents since that time, but, if it is at all possible, Dr. Durrett is going to rule not only the advertising claims made for drug products, but also their formulation, and the manner in which they are marketed. The matter of formulation and the matter of methods of distribution are, according to the law of land as enacted by Congress, functions of the Food and Drug Administration only. In the cases of two products which were formulated, labeled, and marketed in accordance with the desires of the Food and Drug Administration, complete formula changes have been forced upon the manufacturers by the Federal Trade Commission by the simple process of forcing the companies involved to spend so much money that they could see no end to it and consequently could not stand it.

Ask yourself why the potassium bromide and acetanilid were eliminated from Stanback Headache powders and BC Headache Powders—the only ingredients that made them any different from the common run of headache remedies—and in the place of these two ingredients were substituted aspirin and acetophenacetin, giving them nothing different than the well-known and commonly sold A P C formula. After this was done the Federal Trade Commission closed its cases against these companies "without prejudice."

What kind of rule is this when one Government agency without power from Congress can force its own ideas to be accepted by manufacturers over the head of another Government agency with power from Congress which does not approve of these ideas? To get the full background in the situation it must be recalled that when Dr. Durrett was Chief of Drug Control of the Food and Drug Administration, he caused considerable embarrassment to his chief by the ruthless methods he used to get his way. His chief was thought to have a bull by the tail and could not let go. Finally Dr. Durrett resigned to join Squibb, and his chief and the industry breathed easier. It was no secret that the FDA at that time was pleased to be rid of Durrett. So, in face of his present activities, one might well wonder whether or not Durrett is attempting to show the FDA where it gets off in this matter of drug control, and also to show that agency that, he can get his own pet ideas across whether they—with the power from Congress which he has not—get off.

In the two cases mentioned in the opening paragraph an appeal filed with the Commission in November—which has since been denied—in behalf of one of the defendants, the Capaudine Chemical Company, an organization whose financial statement for the six months ended June 30, 1946, shows that it has total assets of $154,409.65, and a profit for the six months before income tax of $4,011.98. The other defendant

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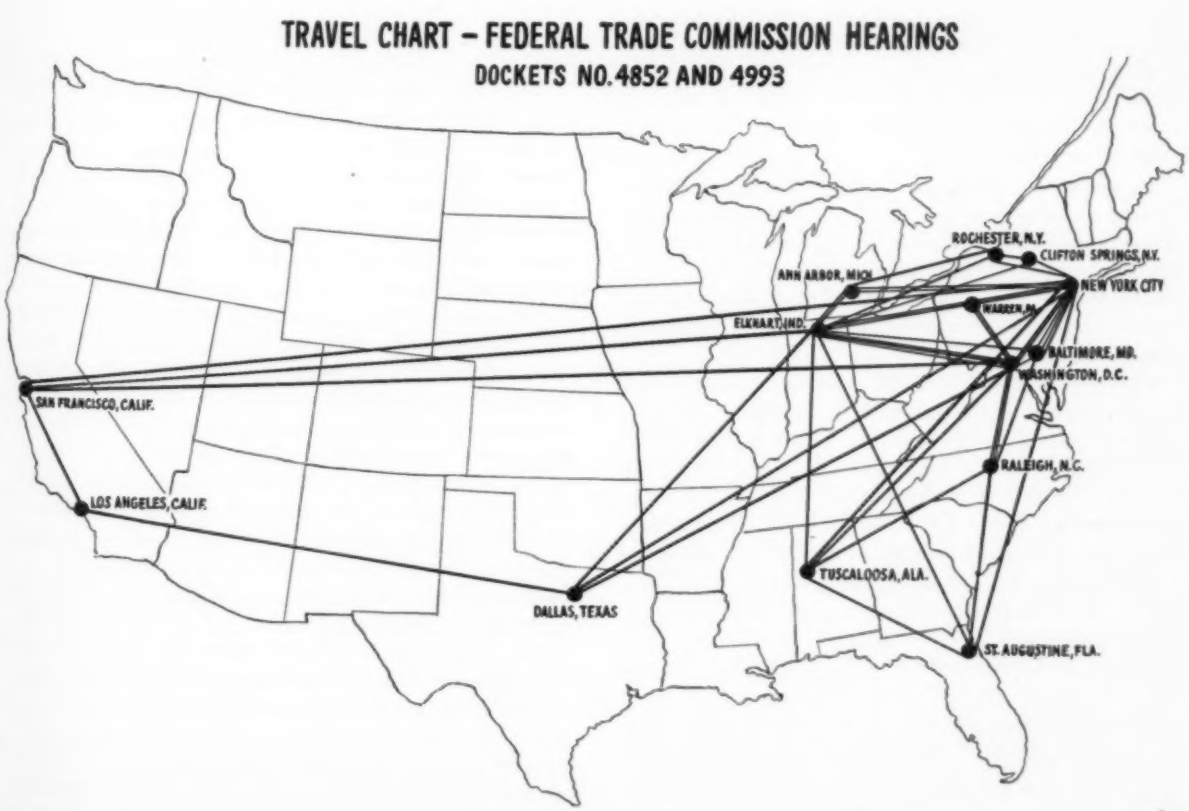

HOW FAR — AND HOW FAST

Building a Selected Distribution

WHEN Mr. Moore asked me to talk to you about selective distribution, particularly in regard to cosmetic selling, I was glad of the opportunity because this has been my particular problem for the last ten years, and I think I have learned something about it.

I am selling a product to retail stores, just as you are. Where you sell a cologne, a shaving bowl, I sell a subscription. But the problem of a subscription sale is that it is for the use fo a third party, the advertiser in Beauty Fashion—this company for one instance. Now if an advertiser does not want, will not sell a store to whom I have sold a subscription, then that sale of a subscription, from a publishing view-point, is wasted. A publisher can manufacture just so many copies of a magazine, based on its advertising rate. It is his job to see that every one of those subscribers, or readers, is of interest to his advertisers.

That is why ten years ago, I began to ask about distribution in this industry, I talked to company heads, sales managers and salesmen, to retailers and others. I wanted to find out how many stores successful companies were selling and what kind of stores and I wanted to know why they were selling a particular number and kind of store.

This subject of selective selling can get mixed up with a lot of theorizing. It can also be dismissed by some salesmen as no concern of theirs, as a company policy which takes no skin off their teeth; or some salesmen can say, "its all right for the home office to get a lot of cockeyed theories, but there is nothing wrong with Jim Jones' store, he pays his bills and why not sell him."

The truth is that this whole subject of distribution is just as important to the salesman as it is to the company. A salesman wants to build up his volume and his income, to make his territory an increasingly profitable one, just as the company does. The reason home office executives see this problem of finding the right distribution more clearly is because they are looking at the whole country. The minute a salesman looks at his territory as a whole and stops looking at a sale in one store, without regard to the possible effect of that sale on other customers in his territory, he see it just as clearly.

Now one of the first things about a selective distribution, as you all know, is that it is one of the ingredients which make up a company personality. Patou has a personality to you—a combination of price, package, odor, company policy and highly restricted selected distribution. I think if you hear tomorrow that they were selling any and every drug store, you would be shocked, it would be like some one you knew, running wild, personality utterly different, strange and unwelcome.

Every successful company forms a personality, becomes known for certain things. Perhaps this will be clearer if we look at your own customers. The personality of certain stores are vivid in your mind. If I mention Bonwit-Teller or Saks Fifth Ave. you think of a store that is a fashion leader, you know that they appeal to a certain kind of traffic and have many loyal customers of a certain kind.

If I mention Macy, you think of a different kind of vivid personality, doing an enormous volume of business on an appeal of price and quality. If I mention Hearns still another personality comes into your mind.

You may never have been in Dallas, but you feel as if you really know Nieman-Marcus—it has a definite recognized place in your mind. And that is true of Hudson, Robinson, Marshall Field and many others.

If you were to start in business as a retailer, the first thing you would do is what every successful retailer has done first. You would very clearly define in your mind the kind of a store you wanted. If you had a fashion flair and liked and knew that kind of business, and the trading area of your store location had enough people of that kind, you would start a fashion store that might grow into a Nieman-Marcus. If you were volume minded, a clever buyer, liked the kind of merchandizing that beats a competitor to a bargain, you would start a

*Talk given by Frazer V. Sinclair before annual sales meeting John Hudson Moore, Inc.

Toilet goods department at James McCreery & Co., New York.

different kind of store. It wouldn't be a question of profits—each kind of store can make as good a net as the other. You would simply know that a retailer can't be all things to all people. You can't have the leading fashion store and compete in volume bargains with the mass store. Neither your competitors nor your customers would let you. That brings us to the first and fundamental principle of selected distribution. As a manufacturer and salesman, you can't sell to all stores, you can't be all things to all retailers. Your customers, the retailers won't let you, because as we have seen, they have very clearly defined the kind of a store and the kind of a personality that they want to establish in the public mind, and they show this in the products they display in their store. And further, your competitors won't let you, because if you fail to identify your company and your product with some section of the retail trade, to establish a personality, a compatibility with that group, others will.

The two principle ways of selling in this industry is by mass distribution and by selected distribution. In a sense, mass distribution is a misnomer because it assumes selling all stores. Actually, the mass distributed product, selling to all drug stores, all stores of chains and usually inevitably, the variety stores, finds its greatest strength on the broad base of the most numberous, less competent retailers, and its greatest weakness at the top among the most competent retailers. Usually the broader the mass distribution, the weaker the position of that brand becomes at the top. Products in mass distribution must be heavily advertised. This is because they depend on large numbers of stores with little inclination or ability to merchandise. Consumer advertising by the manufacturer must do nearly all the work for the retailer.

In selected distribution however, the manufacturer is seeking not only the type and kind of store whose personality and clientele are in line with his own company's personality, but the store or stores in any locality whose management are the alert and vigorous merchandisers. The conduct of selective distribution then becomes a careful exploration of expanding distribution, checked

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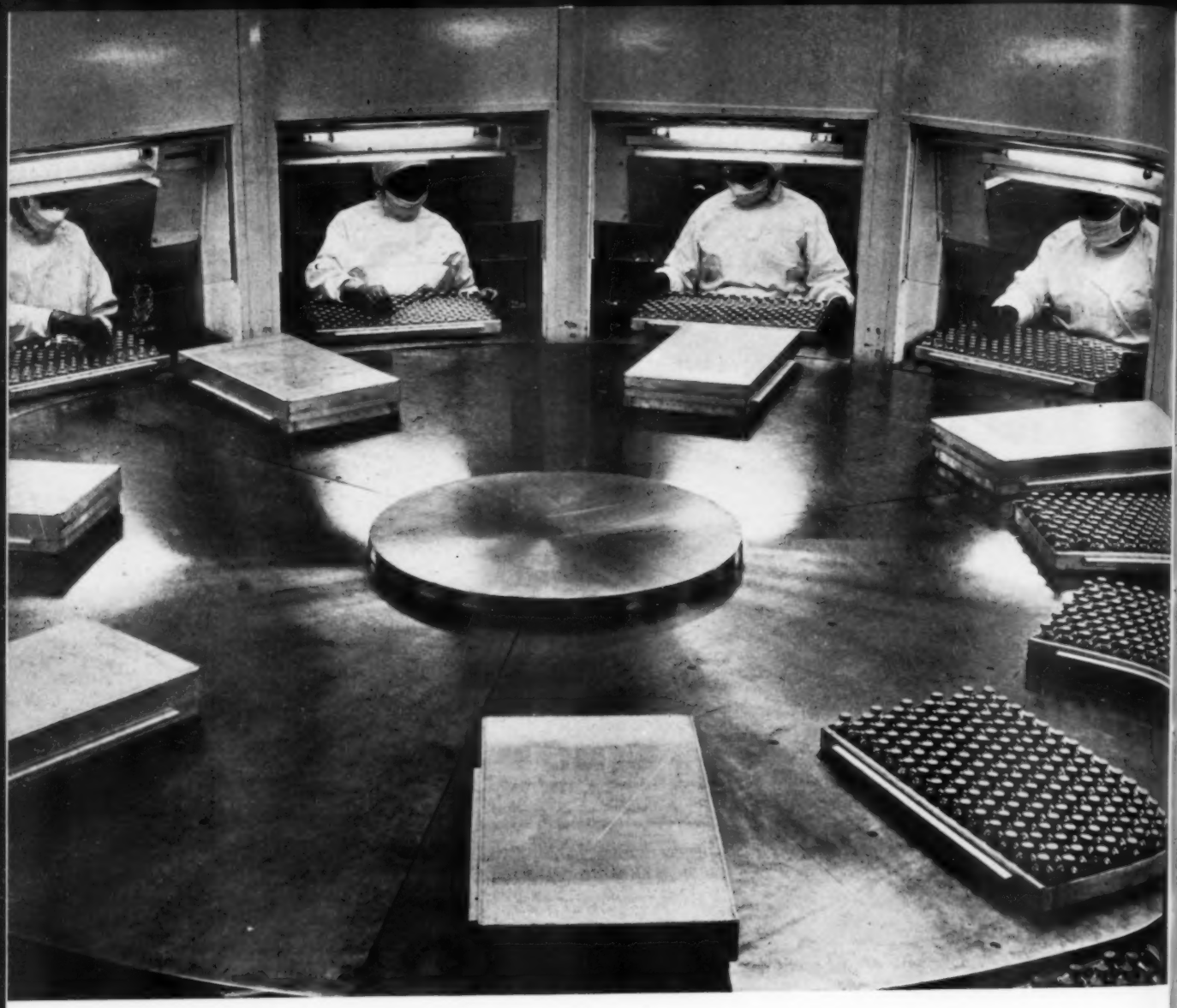


THE PENICILLIN MARKET

PENICILLIN appears plentiful for present domestic uses and large quantities are moving into the export market. However, it is predicted by some interested parties that present production facilities eventually will prove inadequate. This is for the reason that it is believed that penicillin is not at present being used to the greatest extent because there still remain very large numbers of doctors both in this country and abroad who are not fully acquainted with the proper use of this drug. The physicians who are well experienced in the use of the drug are principally those who used penicillin in the Armed Forces. These doctors gained a wealth of experience with the product and fully know its possibilities. Also they are not afraid to the use drug to the fullest extent. As time passes, it is predicted that all physicians will be well versed in the use of the drug and at that time it should have much wider use, thus completely absorbing all the penicillin available from present production facilities, and mayhap calling for increased production.

The market situation in this country is still suffering from the friction that is bound to arise from a number of unrelated types of companies making a single drug product and from the attempt of these companies to

break into the pharmaceutical market by direct selling. The market situation is also suffering to some extent due to the fact that both the crystalline and yellow form of the material are being sold for the same purpose, and one manufacturer is completely converted to production of the crystalline material, while most of the other producers are making both types at the moment.

The largest manufacturer of the product continues to distribute his product exclusively through about seven of the largest pharmaceutical companies. Therefore, this material is being sold to all types of outlets who use or resell penicillin, such as hospitals, doctors, wholesale druggist, retail druggists, and chain stores, as well as for export bearing labels of manufacturers in whom the physicians of this and other countries have complete confidence. Several other large drug and pharmaceutical manufacturers with wide distribution through the same channels are distributing material of their own manufacture in exactly the same way. Another manufacturer, who does not sell directly to the trade, sells to the smaller pharmaceutical manufacturer who do not make their own material, and also sells heavily in the export market. This manufacturer is a large seller of bulk penicillin for the manufacture of tablets, ointments, suppositories, etc.

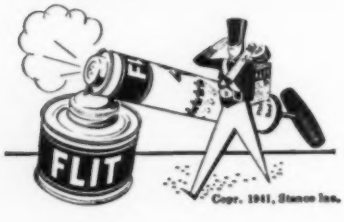
One very large manufacturer, who is the only producer converted completely to the crystalline form, sells its material directly to hospitals, and also sells large quantities in the export market. This company, which is also a main producer of alcohol, has entree to the hospitals since all hospitals must buy their alcohol directly from a distiller. This manufacturer states that the hospitals are the main users of penicillin anyway, and, therefore, this is the best method of distribution. Two other manufacturers, so far as domestic business goes, are said to distribute their goods mainly through the surgical supply dealers. Some of the other manufacturers claim that this method of distribution results in cut prices, since the surgical supply dealers are really interested in selling large equipment such as X-ray equipment, diathermy and short-wave machines, and the like, being willing to use drug and pharmaceutical products as loss-leaders to get the attention and goodwill of the doctors and hospitals.

With this very complicated picture of distribution, it seems that one cannot wonder at the fact the market very often becomes unsettled and prices move downward. When last checked the market seemed to be quite stable at 45 cents per 100,000 unit vial, although there were reports that prices of 45 cents less 15 per cent in one direction, and less twenty in another direction, prevailed.

Quite important in the sale of supplies of penicillin are purchases by bids by the Veterans' Administration, the Army, the Navy, States and municipalities, and other publicly owned institutions. These run into very large quantities, and prices quoted on these bids do not affect the market prices for such goods as are sold through regular distributive channels.

Stoppering vials of penicillin under aseptic conditions at Chas. Pfizer & Co.'s plant in Brooklyn is shown on the opposite page, while the photograph above illustrates measuring diameters in Oxford cup assay, and the one below shows the finished penicillin being sealed, labeled, inspected and packaged at the Pfizer plant.

• Spray bugs with FLIT and they're dead bugs. That's how strong FLIT is—and just as fatal to flies, mosquitoes, moths, ants, gnats, roaches. Yet FLIT spray is pleasant-smelling . . . stainless. Get FLIT today.



NEWER INSECT REPELLENTS

During many centuries insects have been putting the bite on mankind. For a long time there was little that humans could do about it except swat at the pests or run for cover. Today, however, efficient means have been devised to protect people and it is the insects that are being repelled.

Of course many substances have been used to repel insects.[1] While some of them were fairly effective, practically all had certain disadvantages which precluded their more extensive use. The war-born need for better and more efficient compounds has led to a systematic evaluation of numerous substances thought to possess insect repellent properties, Even before the war, in a five-year study at Rutgers University, Granett[2] had examined over a thousand compounds and preparations for their efficiency as insect repellents. With war imminent in the Pacific and in the Mediterranian areas, another group at the Orlando (Florida) Laboratory of the Bureau of Entomology and Plant Quarantine examined thousands of chemicals to determine their value in repelling various kinds of insects. It is said[3] that during their research, there was tested over 8,000 compounds and thousands of additional mixtures. Somewhat later, the U. S. Naval Medical Research Institute undertook a rather comprehensive study of its own. In this work the Food and Drug Administration cooperated by testing compounds for toxicity. As indicated by a number of patents, additional work was carried on by various private groups.

Of the numerous compounds studied, only a few have approached the standards set up for acceptable insect repellents. Such standards and methods for testing repellents were worked out by the Rutgers group under Granett and, with a few modifications, remain the basis for acceptance. As originally indicated,[2] a repellent to be generally acceptable must not only have lasting effectiveness against mosquitoes, but also be able to repel other biting insects like black flies, stable flies and other common pests. In addition, it should be odorless or have a pleasing odor; nonirritating when applied to the skin and harmless when breathed or accidently consumed; have no effect on clothes, and leave no objectionable oily appearance on the skin; be economical, and chemically stable.

Although the conditions varied somewhat with the several test groups, the general method of testing an insectifuge was to apply a small amount of the compound under investigation to the forearm from wrist to elbow. The arm was then exposed to a large number of hungry mosquitoes in a cage; the time elapsing to the first bite being recorded. Those giving protection for 120 minutes against *Anopheles quadrimaculatus* (a malaria carrier) and 180 minutes against *Aedes aegypti* (a nuisance mosquito) were considered worthy of further study. Promising materials were then further tested in the field where various species of mosquitoes abounded. Volunteers, with exposed arms and legs treated with the laboratory-approved repellents, walk about in known infested areas waiting for the insects to bite.[4]

Several modifications of this more or less standard testing procedure have been used, either to eliminate variables[5] or to more closely simulate actual conditions that may be encountered in other areas.[6] For example, in research on repellents, individual variations in the protection afforded by different compounds on different subjects must be considered. Other factors also enter the picture. Thus it is known that repellents are usually less effective when used on persons who are under physical exertion and are perspiring freely. In repellent investigations it is also important to determine the efficacy of a compound, not only against mosquitoes, but also against a variety of insect species[7]. Standard test methods may be used for this purpose.

A number of promising repellents cannot be used because they are irritating or sensitizing to the skin or because upon absorption through the skin give rise to toxic symptoms. Obviously this is a major consideration. On at least one occasion, the excessive use of a well established repellent has been held responsible for toxic absorption resulting in nephrosis[8].

As a result of careful testing and study, several good insect repellents were discovered and recommended for use by the armed forces. Now being supplied to the public, these include compounds generally known as dimethyl phthalate (DMP), Rutgers 612, Indalone, and Dimethyl Carbate, and various mixtures of these individual compounds.[9, 10] Some of these mixtures have been patented by Travis and Jones[11] of the Orlando Laboratory. However, like other patents granted to these workers, the rights to such discoveries have been assigned to the people of the United States, either directly or through the Secretary of Agriculture and his successors in office.

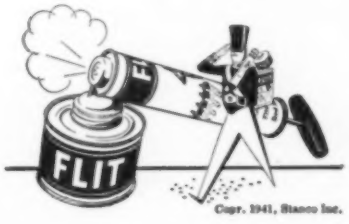
These chemicals and their mixtures have all been studied toxicologically and found safe for use on the skin. They are toxic if taken internally. The most common method of using these oily, liquid repellents is to shake a few drops into the palms, smear evenly, and then apply to the backs of the hands, wrists, neck, ears, face or any other exposed skin. This procedure is repeated until a uniform film is obtained. Too liberal application on the forehead should be avoided because the repellents sting if gotten in the eyes.

Since in some areas mosquitoes cause considerable annoyance by biting through clothing, protection is obtained by spraying or daubing the repellent on clothing where bites occur. Such treatment may be expected to last several days if the clothing remains dry. Because these materials are solvents for paints, varnishes and many plastics, such as watch crystals and some types of fabric, they should be used with caution where these materials are part of the clothing or equipment.

When applied to the skin, these repellents will give protection for from one to five hours, depending on the rate of application, the species of insect, the humidity, the amount of perspiration, and the friction on the treated areas.[10] For maximum protection it is urged[9] that the active chemicals should not be diluted with inert materials, such as alcohol or the like. Although

WHOA, LITTLE BUG...

FLIT spray spells doom for you, too. FLIT is ruinous — not just repellent—to flies, moths, mosquitoes, ants, gnats, roaches, bedbugs, any number of insects, big and little. And yet FLIT spray smells nice, won't stain. Get FLIT today.



Copr. 1941, Standard Inc.

By M. A. LESSER

these diluted products have physical properties that make them more acceptable cosmetically, the period of protection is much reduced by the addition of the diluent.

This point has been considered by Hilfer[12] who noted that "The period of time over which an application is effective would vary with the substance used and also with the vehicle in which it is incorporated. It would appear that an alcoholic solution of an insectifuge would have a higher vaporization rate than if the substance were incorporated in an emulsion or in a non-volatile oil. Applications of such preparation would, therefore, have to be more frequent. On the other hand too slow a vaporization rate may possibly obviate the insectifugal properties of the material."

Consideration of the individual chemicals provides interesting data. Dimethyl phthalate, long used as a plasticizer, has found rather wide acceptance as an insect repellent. It is efficient as a mosquito repellent and is especially effective against *Anopheles quadrimaculatus*.[4] Superior to the other recommended insectifuges for combating chiggers,[7, 13] dimethyl phthalate is also a good repellent for flies, fleas, sandflies and ticks. Applied to the skin, the repellent provides protection for one to six hours.[14]

Recently, as a result of work done under the auspices of the Scientific Advisory Committee for Scotland,[15] dimethyl phthalate was found to be the most effective agent for repelling midges (gnats). Extensive tests were made, using dimethyl phthalate in over fifty pastes, lotions and emulsions. To date, the following preparation has proved most satisfactory; the emulsion providing protection to exposed parts for at least two hours:

Lanette wax SX	**5.0 Gm.**
Triethanolamine	**9.0 cc.**
Oleic acid	**27.0 "**
Dimethyl phthalate	**100.0 "**
Water	**100.0 "**

Chemically speaking, Rutgers 612, or just "612", is 2-ethyl-1, 3-hexanediol, a colorless and practically odorless liquid. It gives long periods of complete protection from *Aedes algypti* and is fairly effective against other mosquitoes.[4] Rutgers 612 is also efficient against chiggers, black flies and other biting insects. During the war "612" attracted considerable attention as the insectifugal component of the Army camouflage creams. Although the formulas have been published in *Drug and Cosmetic Industry*,[16] they are worth repeating because they may offer suggestions to cosmetic chemists interested in adapting them for general use by the public. The first of these formulas called for the use of:

Hydrogenated castor oil	**25.000 Gm.**
Ethylhexanediol	**30.000 "**
Color mixture	**38.000 "**
Phenyl mercuric benzoate	**0.004 "**
Beeswax, yellow	**4.000 "**
Lanolin, anhydrous	**3.000 "**

In the second formula the proportions of all the ingredients remain the same except that 5 Gm. of the ethyhexanediol is replaced with 5 Gm. of dimethyl phthalate.

Better known as Indalone, *n*-butyl mesityl oxide oxalate is unstable in water and alkaline media and must have a high degree of purity, since contaminants may be deleterious. Indalone is very efficient against flies, but is not particularly effective for repelling mosquitoes. In 1937, a patent was granted to Kilgore[17] covering the use of mesityl oxide esters and related compounds as insect repellents and insecticides.

Dimethyl Carbate (cis-bycyclo [2, 2, 1]-5-heptane-2, 3-dicarboxylic acid, dimethyl ester) is a newcomer to the list of repellents recommended by the Orlando Laboratory. As yet there is little published data on its insectifugal activity. According to Setterstrom,[3] limited laboratory tests indicate that it is about 80 per cent as long-lasting as "612" against nuisance mosquitoes.

It is evident that these chemicals vary greatly in their effectiveness against different insects. It would seem logical, therefore, to mix them in order to determine if the combinations would be effective against a wider range of insect species. When this was done a surprise awaited the investigators. Instead of the average period of protection that would ordinarily be expected, combinations of dimethyl phthalate, Rutgers 612, and Indalone showed a remarkable synergistic action. Thus, instead of the average period of protection that would be expected, there was as much protection against *Anopheles quadrimaculatus* as was previously obtained with dimethyl phthalate alone. The mixtures were as good against biting flies as was pure Indalone, and provided protection comparable to that of Rutgers 612 against *Aedes* and other mosquitoes. The mixtures gave as good protection against chiggers, immature stages of ticks, sand flies, buffalo gnats, and other insects as any of these three repellents used alone. The triple mixtures were therefore admirably adaptable to the then critical problem of supply because the proportions could be varied to some extent without sacrificing efficiency.[4]

The three ternary solutions which showed particularly good repellent results have been described in detail in a patent granted to Travis and Jones.[11] More recently in a report in which Dimethyl Carbate was added to the original trio, Travis and Morton[9] presented five examples of such synergistic repellent mixtures. These are as follows, all parts being by weight.

	A	B	C	D	E
Dimethyl phthalate	3	1	3	2	2
Indalone	1	1	1	..	..
Rutgers 612	1	1	..	1	..
Dimethyl Carbate	..	..	1	..	1

It is pointed out that while mixtures containing two repellents are fairly effective, they do not repel as wide a range of insects or for such long periods as do the triple mixtures.

(Continued on page 130)

EVAN P. HELFAER

Team Play and Hard Work is His Creed

AT A RECENT Lakeside employee gathering Evan Helfaer looked around him and remarked: "In 1932, if I had planned such a get-together as this, one other fellow and myself would have been present." This off-hand comment describes in deeply etched language the story of Lakeside's remarkable development. It is a fascinating tale of a company born amid the aches and pains of a long and terrible depression.

The story of Lakeside Laboratories is really the story of its quiet, modest 48-year old president, Evan P. Helfaer. While the company was actually started in 1925 by Dr. Herman Roehling, the business was only worth $520.00 when Evan Helfaer took it over. So, for all practical purposes, Lakeside's birth began in 1932 when Helfaer became the managing head following the death of his friend, Roehling.

Better to understand Lakeside's reasons for success it is well to go back to find out something about Evan P. Helfaer.

Evan Helfaer was born in 1898 in Milwaukee. Even before reaching his teens young Helfaer was working for himself selling newspapers. When he finished high school, the future Lakeside president went on to the University of Wisconsin where he earned his way washing dishes. He graduated with a degree in chemistry and had the added distinction of being appointed in his senior year, to teach the intricate science to the freshmen class.

After working in an ammunition plant during World War I, Helfaer got a job as a chemist in a large dye manufacturing laboratory. Not long after the roaring twenties made their entrance and chemist Helfaer became a builder of apartments, homes and stores. Two of Milwaukee's finest apartment houses stand today as monuments to this same Evan Helfaer. Just when things were rolling along smoothly the 1929 crash came and with it over $1,000,000 of Helfaer real estate was washed away. After the boom bubble burst Helfaer found himself in debt to the tune of almost $250,000. He had plenty of brick and mortar, but his liquid assets were nil. With his usual directness, Helfaer took the bull by the horns and managed to salvage what he could from the catastrophy. He held on to some of his real estate and at the same time took over the $520.00 business of his late friend, Herman Roehling. At that time the unknown Lakeside Laboratories was located in the attic of a private home in a Milwaukee residential district. The rent was twenty-five dollars a month and the only employee was a young fellow who filled ampuls . . . he, incidentally, is still with the company, but as a production supervisor.

Under modest Evan Helfaer's direction, Lakeside has grown from the humble attic quarters to its present modern and airy building. Late last fall the ground was broken for a new plant which, when completed, should make it one of the most up-to-date in the industry. The number of employees has increased from one to several hundred. Such physician-accepted products as Mercuhydrin, Menacyl, Estrogens and Arseno-Bismulak, plus many others attest to the thoughtful leadership of Evan Helfaer.

The Lakeside president's philosophy is team play and hard work. He believes in the principle of group management and delegated authority. Halfaer is careful to guard against "committeeitis" . . . a too common disease in many companies.

(*Continued on page 129*)

NO RECIPROCITY WANTED IN AROMATICS

DIRECTING attention to the importance of the aromatic chemical industry in this country as an integral part of synthetic organic chemical industry, as an industry which was of very considerable importance in the war effort, and as an industry whose customers want left unchanged, the domestic manufacturers in this industry have filed a brief with the Committee for Reciprocity Information opposing any further reductions in the tariffs levied on the products of the industry in the present move to promote international commerce to help relieve the ills of the world.

The brief states that there are about fifty-five plants located in many different States of this country wholely or partially engaged in the manufacture of so-called aromatic chemicals. "A large percentage of their employees have become skilled operators of special equipment, such as vacuum still, etc., and their rates of pay are high and their employment has been characterized by a steadiness probably unsurpassed in our economic society," states the brief, which continues: "Although in these changing times no statement on pay rates is valid, we believe that an average straight time hourly pay rate of about $1.15 per hour is not far from correct, in spite of the relatively recent acquisition of considerable numbers of new employees taken on at starting rates of pay.

"In an industry such as ours, it is impossible to measure exactly comparatively labor costs with competing foreign countries—particularly today. When the diversity of our production is considered, it is obvious that no really precise comparison in labor costs can be made per unit of output. However, we do know that in contradistinction to the hourly rates mentioned above, those which prevail in our industry in France and the Netherlands probably average under 41 cents. Contrary to many popular misconceptions, our labor is probably not more productive than that in similar plants abroad. It is true that, during the war years, freedom from foreign competition and increased needs have boosted our total output with a substantial resultant increase of productivity per individual. However, there has been a straight time hourly increase of wages of about 60 per cent during this time for the same class of work."

Pointing out that the industry is a supplier of essential ingredients to the soap, perfume and toilet goods industries, the brief states that these producers need the products of the aromatic chemical industry" to operate and sell merchandise ranging in volume well over a billion dollars. This does not include those aromatic chemicals used as flavors in food products, confectionery, etc., which bulk so enormously in our economy."

As proof that domestic users of the products of this industry prefer to buy from the manufacturers of the

domestic aromatic chemical industry as at present constituted, the brief states, "it is most significant that on June 20th, 1946 the Board of Directors of 'The Toilet Goods Association, Inc.' passed the following resolution—'Resolved, that the Toilet Goods Association support the Aromatic Chemicals Industry in opposing any reduction in the existing tariff on aromatic chemicals and that this support take the form of a letter to be addressed to the Association representing the aromatic chemicals industry by the Toilet Goods Association expressing the above attitude.' When the customers of an industry believes that it deserves protection, who should gainsay their decision?"

Significantly, the brief says: "we point out these facts in order to show that it is well nigh impossible in normal times to have anything but infinitesimal competition on aromatic chemicals *per se*. Either domestic production or imports control the market on specific products. They do not share it.

"Were the domestic industry inefficient, the case would be different. However, improved methods, research and planning, together with increasing production have caused prices in aromatic chemicals to more or less steadily decline until 1939, with only minimal rises since that time except on products made from imported raw materials."

THE many products of the industry which were once considered solely as "aromatic" chemicals but became important during the war, the brief gives the "following few" examples:

Amyl Salicylate—used by the army in all kits as specific protection against mustard gas.

Benzyl Alcohol—used in making plasticizers, electrical insulators, special adhesives, etc. essential to the war.

Benzyl Benzoate—used as the most effective scabicide and as a solvent for DDT spray on humans making it much more effective than as a powder. Also used as the most effective mitocide against scrub typhus and so essential to the Pacific campaign that the government set up an enormous program of production.

Eugenol—used in oral and dental treatment.

Ethyl Formate—a necessary intermediate in manufacturing Vitamin B_1.

Heliotropine—an intermediate in the manufacture of certain important insecticides and pharmaceuticals. We are told that these were necessary for the war in the India Burma theatre.

Acetophenone—an intermediate in making certain cincophen derivatives, important drugs.

Phenyl Acetone—an intermediate in the production of Amphetamine and Desoxy-Ephedrine which are widely required pharmaceuticals.

Phthalic Acid Esters—used as mosquito repellents and as plasticizers for many purposes, including explosives. These were so important as to be rigidly controlled by the WPB during the war.

Dichlor-Dihydroxy-Diphenyl Methane—used for impregnating cotton goods against mold, etc.

Phenyl Acetic Acid—used as an intermediate in producing certain barbiturates and also in a semi-catalytic manner in production of Penicillin.

FOLLOWING this list, the brief makes the poignant statement: "However, almost more important than any specific production was the know-how, the available equipment ready to operate and the skilled labor and technical personnel which could be turned to prompt account." With reference to the aromatic products the use of which have moved into other fields and are no longer listed by the U. S. Tariff Commission among the aromatic chemicals, or only partially so, the brief points out: "Nevertheless, you cannot divide the industry in production any more than you can remove a vital organ and have the live animal. Irrespective of the ultimate field in which they are used, the products are still produced in the same plants."

The brief sums up as follows:

1. We operate an industry which has had an expanding employment for years at high wages for its workers.

2. We have built up relatively large investments in plant and equipment.

3. We have developed an extraordinary know-how, at least comparable with that abroad.

4. During peace and stress of war, we have supplied our country with ample amounts of our merchandise at progressively lower cost.

5. We have developed new social uses for our products and have supplied them to the armed forces where they were necessary for our war potential.

6. We have devoted large sums, as well as the efforts of many top scientists, to research and development which have introduced new products and new uses for old ones. They have been used in many cases in the broader field for chemicals.

7. As an integrated industry, we must so live and cannot continue if subjected to substantial amputation.

The list of the companies in the industry submitting the brief follows:

Aromatic Products, Inc., New York.

Dodge & Olcott, Inc., New York.

E. I. DuPont de Nemours & Co., Inc., Wilmington, Delaware.

Fairmount Chemical Co., Inc., Newark, N. J.

(Continued on page 132)

EMULSION TECHNOLOGY

(Part III)

By I. R. HOLLENBERG, M.S.*

IT CAN be seen from the preceding instalments that in the emulsification process there are many forces at work, pulling in different directions to exert varied effects. For example, Stamm and Kraemer (25) have pointed out that in dispersing globules of one liquid in another there are two opposing forces at work on the droplets being dispersed. First, there is the natural tendency of surface tension, which, as previously noted, causes the droplets to coalesce. This force is opposed by the presence of surface active agents or by mechanical stirring, which act to form the droplets into elongated shapes which break up when their length exceeds three times their diameter. Both of these forces are influenced by surface tension, phase volume ratio, viscosity and density of each phase. Johnson (27) observed that the role of surface tension is of major importance only when mechanical stresses are low. That is, when an emulsion is stirred by ordinary means surface tension influences the degree of dispersion to a marked extent. However, when an emulsion is subjected to colloidal milling or to high pressure homogenization, where mechanical stresses are high, surface tension ceases to be a controlling force.

Meissner and Chertow[24], in a recent study of factors involved in breaking emulsion systems, observed that breaking results from the growth of dispersed phase droplets which migrate to the interface. They noted that one of the main causes of droplet growth was the result of collision between the globules, due chiefly to the Brownian movement. Since it has been widely noted that the Brownian movement is most active at a particle size of 2μ and slows down considerably at 3μ, reduction in particle size, as far as this factor is concerned, would not seem to favor stability. Nevertheless, the general rule is that the finer the particle size, the more stable the emulsion.

One means of retarding the migration of droplets of the dispersed phase is to maintain adequate viscosity in the continuous, or disperse, phase. In oil-in-water emulsions the viscosity of the water phase is increased by the addition of various gums, alginates, cellulose derivatives, etc. In emulsions of the water-in-oil variety, the viscosity of the oil phase is increased by the addition of some of the fatty alcohols, certain high molecular weight fatty acid esters, or by some of the more modern types of absorption bases.

*Van Dyk & Co., Inc.

It is apparent then that in an emulsion we have a complex system involving many forces which affect its stability. We may obtain stability by balancing these forces until a state of equilibrium is reached. In attempting to secure a balance, we must take into consideration the individual conditions that prevail as well as the environment in which the emulsion has to function.

Once equilibrium is obtained, it is necessary, in order to insure prolonged stability, that it should not be disturbed by the addition of other substances which might result in unbalance or by the breakdown of the ingredients which might adversely affect the emulsion in the same manner.

Chemical Stability:

Most works concerned with emulsion stability deal with the subject substantially along the lines briefly indicated in the foregoing paragraphs; that is, the various physical forces involved are discussed in relation to their effect upon the stability of the emulsion system. Another frequent cause of breakdown, but which has received comparatively little attention, is chemical decomposition of one or more of the components of the emulsion. This difficulty usually manifests itself after the emulsion has been standing for sometime and the break is frequently attributed to other causes.

The chemical decomposition with which we are concerned at present can be classified into three categories!

1. *Incompatibility*—In many instances, one or more ingredients of an emulsion are perfectly stable by themselves; in a mixture, however, they tend to decompose. It is elementary, for example, that substances which are unstable to moisture should never be put into a water emulsion; acidic materials should not be mixed with alkalies; nor should easily hydrolyzable esters be used in conjunction with strong alkalies.

2. *Oxidation*—Emulsions containing fats and oils of vegetable or animal origin, particularly where unsaturated groupings are present, are prone to oxidation. Suitable anti-oxidants should be employed to prevent this breakdown; but these, as well as other emulsion components, should be selected from the standpoint of compatibility as well as efficacy.

3. *Bacterial or Fungicidal Decomposition*—Breakdown due to the development of micro-organisms is a rather common occurrence. In this, factors other than the

ingredients of the emulsion are frequently involved[23]. There are a number of widely used commercially available preservatives which are quite effective in overcoming difficulties of this nature. The importance of protecting both the water and the oil phase should be stressed in this connection. In other words, the preservative should be sufficiently soluble in both phases in order to prevent the growth of micro-organisms in either phase.

Determining Stability:

The majority of emulsions with which the average technician is concerned are required to remain stable over a rather long period. The desirability of being able to determine in advance the stability of a given emulsion is therefore self evident. There are a number of widely used methods for testing emulsion stability, but unfortunately none are entirely foolproof. A reasonably accurate method for liquid emulsions is to centrifuge them at a uniform speed, checking the time elapsed before separation against a known standard. A widely used method is to subject the emulsion to abrupt temperature extremes under controlled conditions. While testing emulsions by this method, the author has on occasion had the experience of having the samples subjected to high and low temperature treatment remain stable while controls from the same batch separated at room temperature.

Clayton[22], in 1918, suggested the electrical conductivity method for identifying emulsion types, the idea being that an oil-in-water emulsion would conduct an electric current while the opposite type would not. Orelup[20], in 1938, devised an electrical instrument for emulsion phase testing employing this principle. The present writer has had considerable success in employing this instrument for detecting incipient instability in water-in-oil emulsions. By testing for electrical conductivity in the disperse phase of water-in-oil emulsions, the presence of even minute quantities of water is detected, indicating instability.

Another, and more effective, method which the writer has devised works equally well with oil-in-water and water-in-oil emulsions of both liquid and solid types. It is a rather delicate and tricky procedure; but, in the author's opinion, it is worth the additional trouble involved. In examining oil-in-water emulsions, a sample is put on a microscope slide under a low power objective.

(*Continued on page 128*)

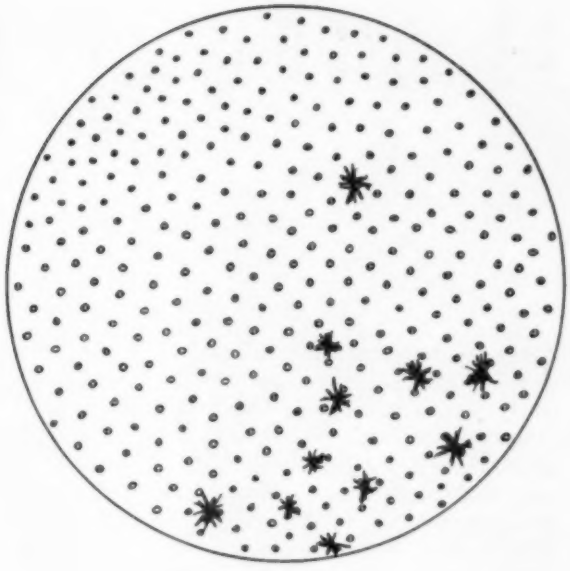


FIG. I - STABLE EMULSION

Small dots are droplets of dispersed liquid

Larger black specks are undissolved dye particles

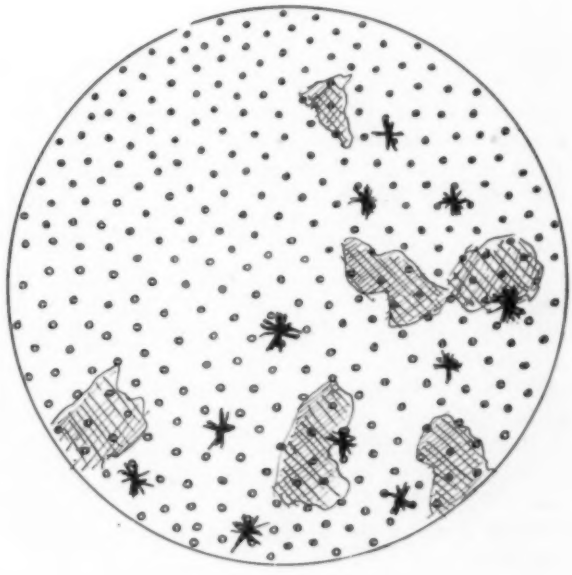
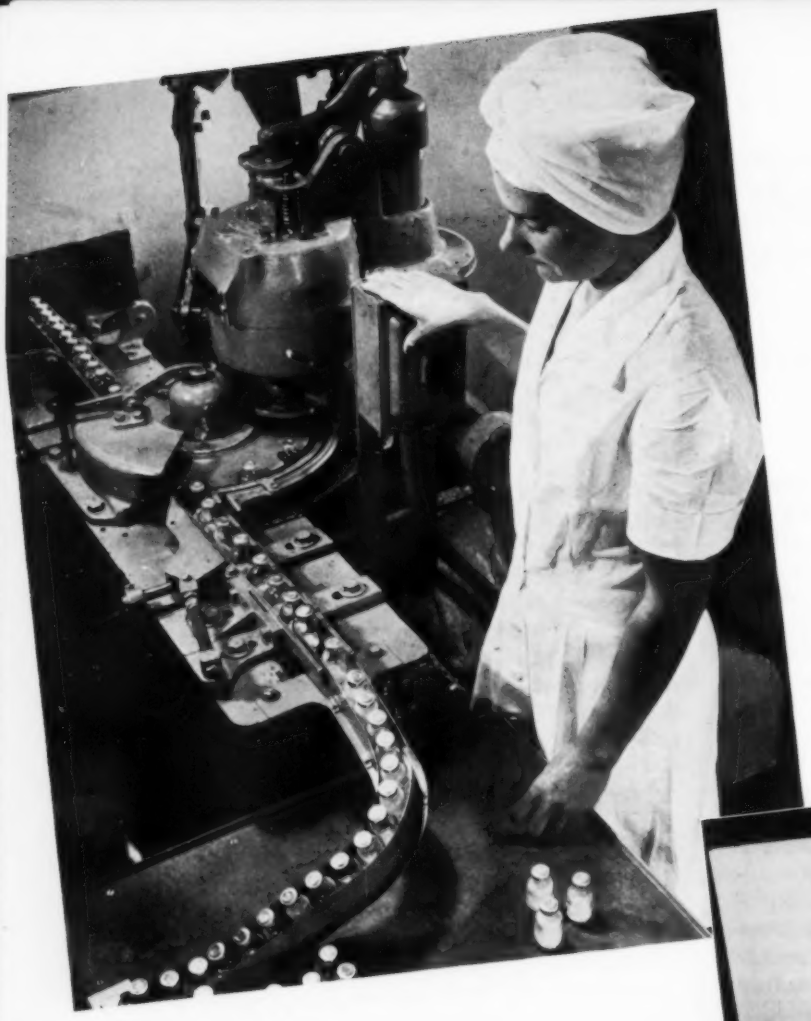


FIG. II - UNSTABLE EMULSION

Small dots are droplets of dispersed liquid

Larger black specks are undissolved dye particles

Shaded areas are pools of dissolved dye



Vials of finished streptomycin are shown at the left passing under germicidal lamps at Merck & Co., Rahway, as they are carried through a tunnel in wall from closed (sterile) area to aluminum cap machine. Below, containers of semi-finished streptomycin, as received from the Elkton, Va., manufacturing plant, are exposed to the "invisible curtain" of ultra violet rays before being taken into sterile areas at the Rahway finishing plant.

WE HEAR a great deal about electronics these days. Some of the equipment developed is very technical and makes rather uninteresting reading for the average layman. Probably more publicity has been given to electronic gadgets, real and imagined such as apparatus that will open the garage door, cook meats "from the inside out" and perhaps do such things as pinning the baby's diapers.

There is one development which is somewhat in-between the two extremes and at the same time is of great interest to businessmen who deal in products that can spoil and lose money for them. We refer to ultraviolet tubes, commonly referred to as "germicidal" lamps. Of course these are not war-born or as new to the public as radar, etc. However, while the war held back manufacture of them, it did not retard development. There has been a great deal going on experimentally both in the laboratory and under practical conditions.

The air is one of the most prolific sources of bacteria known, yet almost everything has been sanitized "but" the air. Air-borne bacteria and microorganisms are responsible for substantial losses in the drug and cosmetic industry today. Many concerns have learned that ultraviolet will help them to reduce contamination of their product. One of these is Merck and Co.

Streptomycin made by large scale production is being finally processed and packaged in one of their new buildings in Rahway, New Jersey. Sanitation in every nook and corner is a "must" in this delicate operation. Every means of securing the highest degree of sterility is utilized and it was a matter of course that a highly lethal ultraviolet lamp was adopted to assist. Ultraviolet was first tried out by Merck about five years ago

*Hanovia Chemical and Manufacturing Company.

in connection with penicillin. Results were sufficiently satisfactory to warrant continued and further use.

Visitors may observe the operations in Rahway through the glass panes of a viewing corridor. Entrance into the working areas, however, requires the wearing of white clothing and the stringent observation of established rules for maintaining sterile conditions.

Inside—it might justifiably be called the inner-sanctum. There are sealed cubicles or compartments where the work is done. Operators subdivide, weigh and place the streptomycin in small vials which are immediately closed with rubber stoppers.

There are ultraviolet tubes located immediately over the processing table in each cubicle and then are again mounted on top of the ceiling fluorescent lighting fixtures. The lamps give off a characteristic purplish glow. Further, at each point where "spot" exposure of streptomycin may take place, additional germicidal fixtures have been installed.

The vials are placed on an endless conveyor belt and sent on their way to be finally packaged. As an additional precaution, ultraviolet now administers the "coup de grace" to any malingering bacteria. On the belt, vials pass through a tunnel in the wall and under an ultraviolet lamp to an aluminum cap machine just outside the sterile area. Besides providing the last protective curtain, the ultraviolet irradiation prevents impure air from entering back through the tunnel, which gives the streptomycin its first introduction to the outside world.

Ultraviolet has many applications. Most common is in therapeutic lamps, used in every hospital and by most physicians. It is also used by hospitals, schools and in commercial offices for human protection against cross-infections. In the latter cases, absenteeism has been reduced due to cutting down the incidence of colds and other bronchial illnesses.

This sanitizing agent is not a cure for all evils by any means but it is a media which has proven so successful in many applications that it is well worth investigation for specific problems. If it does nothing else but promote general sanitary conditions in a plant, reducing odors and cutting down air-borne infections to humans, it might be worth its cost.

It should be known that there are various types of ultraviolet lamps, some of which are best for particular uses. It is not wise for prospective users to buy any ultraviolet lamp that comes along because it might be very effective for some purposes but of little value in the particular application involved. It is therefore advisable to contact a reputable manufacturer of this type equipment and securing complete information before deciding on an installation. There are several important concerns in the field who have done a great deal of research and development. They will undoubtedly submit impartial opinions as to the effectiveness of the lamps in particular cases if they are supplied with details of the problem and conditions existing in a plant.

It has been proven that the proper ultraviolet tubes will kill air-borne bacteria and micro-organisms that cause mold on certain products. There is conclusive scientific evidence to support this. The thing to determine however is in what manner your product can be protected with this new application.

GERMICIDAL LAMPS FOR SANITIZING

BY EDWIN MORAN*

NEW

★ Heat-sealed Foil Wrap ★

Ideal for drug products, foods, etc.

- Affords a high degree of protection to your product
- Colorful... Attractive!
- Has easy-opening device for convenience of user

Whenever you open a package of Trolls Mints, you'll find them as fresh and crisp as when they left the Troll plant . . . thanks to this new heat-sealed wrap of laminated foil, made by our CA-2 model. This highly protective wrap shuts out damaging moisture to a remarkable degree, and therefore makes an ideal wrap for many types of drug and pharaceutical products that must be kept fresh and wholesome.

The Troll package in sparkling silver, red, white and blue, is a typical example of the attractiveness that can be given any package with this foil wrap. And when the easy-opening tab is used, *only the end of the wrapper is removed.*

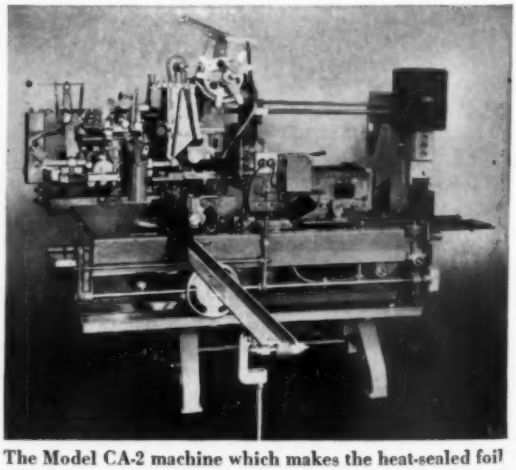
The secret of this wrap's superiority lies in the manner in which the machine applies it. The laminated foil is fed from a roll. Before the actual wrap is made, the machine prints strips of melted paraffin on the inside of the wrapper where the end seals and long seam are made. These paraffin strips are then heat-sealed in the wrapping process, causing the wrapper to adhere tightly to the carton. Special provision has also been made to seal the small slot through which the end of the easy-opening tape protrudes. Atmospheric penetration is thus guarded against at every point.

Having a speed of 150 cartons per minute, the CA-2 machine makes this highly desirable wrap economical to use.

Send us a sample of your product

If you will send us a sample of your product and present package, we'll be glad to show you how the CA-2 would wrap it in laminated foil. Write to our nearest office.

A quick tug on the easy-opening tape removes the end of the wrapper, giving access to flap of carton.



The Model CA-2 machine which makes the heat-sealed foil wrap has a speed of 150 packages per minute... Printed design is accurately located on carton by electric eye.

PACKAGE MACHINERY COMPANY
Springfield 7, Massachusetts

30 Church St., New York 7 • 111 W. Washington St., Chicago 2
101 W. Prospect Ave., Cleveland 15 • 849 Marietta St., N. W., Atlanta 3
443 S. San Pedro St., Los Angeles 13 • 320 Market St., San Francisco 11
18 Dickens Ave., Toronto 8

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Packaging and Selling

U. S. Toilet Preparations And The World Market

In the Foreign Commerce Weekly reviewing the overseas opportunities for the distribution of American toilet preparations, T. W. Delahanty, associate chief, Chemical and Drug Division, Department of Commerce, points out that currently the sales of these products in foreign markets should range from $30,000,000 to $60,000,000 a year at least equivalent to 10 per cent of our production.

For the two decades prior to the recent war, the United States was the leading producer of these products, yet France with about one-half our output, was the outstanding supplier in world trade. The fact that our foreign sales were largest in 1928 and smallest in 1942 probably reflects limited interest in the consumption prospects overseas throughout that period. Significantly, export sales of toiletries seldom exceeded 5 per cent of production in any year, and relatively few firms were engaged consistently in this trade.

There are some firms in this industry that were exporters as far back as 1914, when foreign sales of $1,535,000 were recorded. But as 1945, though the production of American toilet preparations had grown twenty-fold to thirty-fold, foreign sales were $15,737,601 or only ten times more than they were in 1914. On the basis of production-growth, our sales abroad in 1945 should have been not less than $30,000,000, and 1946 statistics will probably register this gain.

When we consider the nationally-advertised-product houses whose merchandise has already acquired a degree of universal acceptance, the job of promoting sales in relatively unfamiliar foreign markets constitutes a challenge which could be met with enthusiasm. In this category are many countries with very sizable populations which were prominent prewar markets and could be strategic distribution points for increasing toiletries sales. For example even in 1928 the United Kingdom (taking more than $2,000,000) and China (taking $800,000) were our first and third best markets. By 1938 the Netherlands and its Asiatic possessions (formerly negligible) became our sixth largest market with imports of $600,000. Even France, Denmark and Japan were leading outlets for our toiletries in earlier years and can be so in the future.

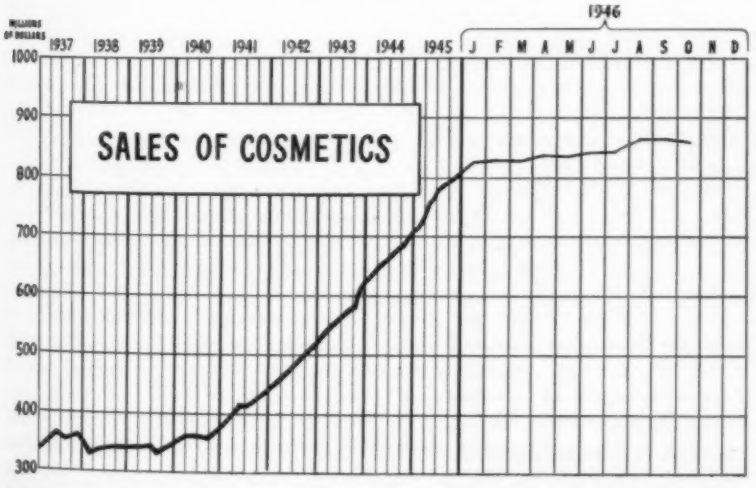
In general, much, if not all of our loss in sales to former large consuming areas and our seeming lack of interest in smaller markets or prospects was due to war and resultant limitations. Now that the restrictions are withdrawn and the economic situation in most countries is improving, if we are on the job we should have little difficulty in attaining at least a $30,000,000 export of toiletries in the years ahead.

In the past, when a country imported considerable quantities, not infrequently some United States toiletry firms engaged in localized production. Our foreign-trade statistics then registered declines, but this was not so much a sign of a saturated market for our products as it was an indication that too few enterprising firms were participating.

In any case, there is a need for more active international trade promoters. The prospective customer abroad is fundamentally aware of our famous brands through the medium of our magazines, movies, radio, and related advertising, and responds when service is rendered on a par with domestic selling or at least comparable to that of local competitors.

Prospective agents visiting the United States from foreign lands are becoming more numerous, but with few exceptions they are seeking the widely advertised brand connections. Every firm should know that only a relatively small number of United States toiletry firms enjoy most of our exports. More to the point, the necessity of equitably allocating to agents abroad a greater share of funds for promotional expenditures.

The United States toilet-preparations industry with its 600 or more establishments is by and large composed of small business operations. Despite this, when any firm, decides to sell in international markets, it should have a satisfactory distribution in the United States. Likewise it should be financially able to maintain a separate and distinct foreign-trade department of specialists and accord them proper support. Briefly



Sales of cosmetics for the twelve months ended with October 1946 totaled $859,488,000. This compares with $863,474,000 for the twelve months ended with September 1946 and with $792,700,000 for the twelve months ended with October 1945.

stated, once set up, the same service should be rendered to the customer abroad as is accorded in the United States, whether in prosperity or depression or whether merchandise is in short or surplus supply.

Some people think that our toiletry merchandise is of such a high quality and so expensive that it can be sold only in countries with high standards of living. However, this view is not substantiated, either by statistics or our travelers. We have ultra price lines, but these are a small part of the industry. The great bulk of our products are in the medium and low priced fields, and we have the widest range of sizes and packaging to meet the demand of every income class. United States toiletries could be sold as readily in every world market as is the case with the popular brands available in the 5-and-10-cent stores.

We have the quality, the output, the variety, and the range of prices to attain the principle supplying position in any market of the world.

Something "Neo" Has Been Added

The French have a word for it, as they have for everything. A friend of ours, a pre-war Paris perfumer, tells us that so many war born French houses have been refused admittance to the French Perfume Syndicate, that they have formed their own syndicate, called "Neo-Perfumers."

That may explain the crowds of new faces you may have seen in Fifth Avenue department stores lately looking for the cosmetic buyer.

Beau Cake is the name of a new cake make-up which will be introduced by Cashmere Bouquet in February. Beau Cake comes in six shades in a dainty pastel case.

The Cosmetic Trend

One of the puzzles of the present situation as it affects the outlook for the new year is that, while buyers complain about slow business, counters are actually doing better than during any time in their history and there is hardly any type of cosmetic product that does not sell better today than it did a year ago. One is justified, therefore, in looking upon these complaints as a state of mind, caused not so much by an actual decline in the demand for cosmetics, but by a temporary slowing up of the rate of growth. After all, percentage rises become automatically smaller the larger the basic volume.

This being so, cosmetic manufacturers may do well to take any possible cutting down of orders just before Christmas not so much as an indication of things to follow, but rather as a tendency of buying offices to return their ordering practices to the more leisurely manner of earlier days. Although the supply situation may still be unsatisfactory from the manufacturer's point of view, unless the industry can supply reliable proof of the continuance of an emergency, buyers will prefer their new method of procedure.

Moreover, looking at the situation from the American manufacturers' point of view, there is the undeniable fact that today, after nearly one year and a half of peace, there is yet no evidence of a return of foreign competition to its former level; neither upon the counters nor in the mind of buyers. Nineteen hundred and forty-seven, to all appearance, will remain an American cosmetic year and there is every expectation that this condition will persist. This does not mean to say that foreign cosmetics have not and will not enter the American market. However, it will need a much larger import volume than that ever attained in the years before the war to upset the equilibrium of a cosmetic industry that has grown in the meantime from a mere $365,000,000 to a figure approaching 900 millions. What looked mighty big eight years ago will not make much of an impression in 1947.

With this in mind and probable sales of $300,000,000 to department stores alone in 1947, not to speak of growing sales to all their other still expanding outlets, it does not look as if the cosmetic industry will have much reason to worry through the year, unless for reasons unconnected with selling.

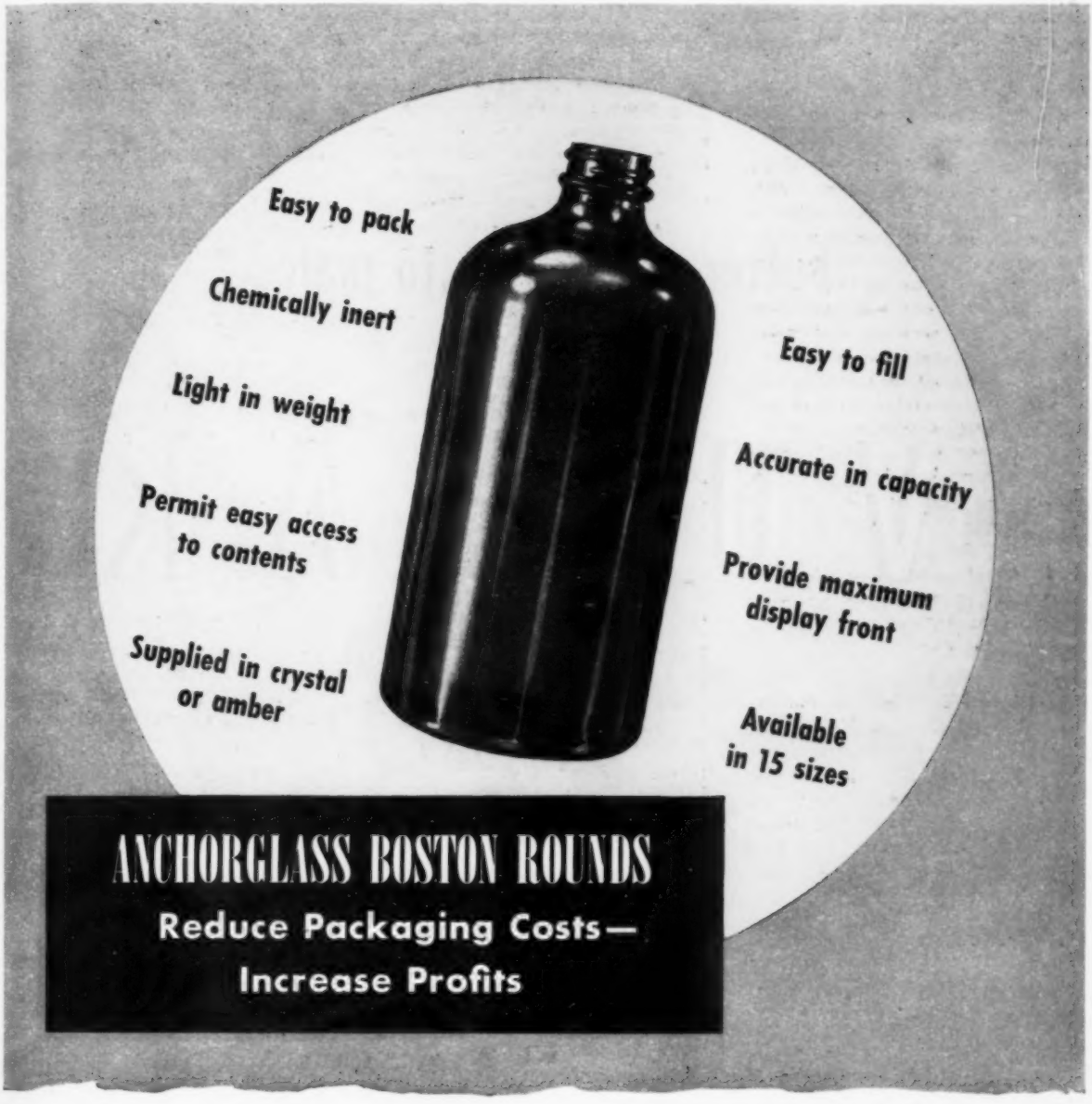
Dentifrice Survey

The minds of the copywriters that turn out the advertisements for the dentifrices on the market today unlike the "Mills of the Gods" turn exceeding fast and in their tie-ins claim the use of their particular product will do away with bad breath, strengthen gums, win a maiden's heart, start a man off on a successful business career and clean and brighten the teeth. Usually in that order.

Since dentifrice advertising is the principal means of dental information reaching the vast majority of the public, these products are largely the only means of preventing tooth decay, whether they have the consent of the dental profession or not. The main advantage of these various dentifrices is that when used properly with a tooth brush, they will clean the teeth. And regular application will clear away the particles of food that might otherwise be the cause of tooth decay.

Of the three main types of dentifrices on the market, paste, powder and liquid, almost $139,000,000 dollars worth were sold in 1945, more than twice the amount sold in 1940. Tooth paste was the most popular type, being used by some 70 per cent, powder was used by about 25 per cent and the liquid type by 5 per cent.

Tooth powder usually consists essentially of abrasives such as calcium-carbonate, calcium phosphate and calcium sulfate, detergents such as soap and sodium alkl sulfate, together with saccharin or sugar, and flavoring. Tooth pastes are similar in composition to these powders, except for the addition of water or alcohol and binding and stabilizing agents such as glycerin, propylene glycol and vegetable gums. Other ingredients may be present in greater or lesser amounts, according to the claims of the manufacturer. Often some manufacturer will add an ingredient in excessive amounts and claim



THE production advantages of Anchorglass standard Boston Rounds automatically mean lower production costs which in turn mean more profitable operation.

The smooth cylindrical shape makes possible easy, *fast* filling and simplified label application. You'll get long production runs with minimum downtime for changeovers, and at the same time simplify your inventory problems.

Use of Anchorglass Boston Rounds reduces shipping costs because they're lightweight — yet they're exceptionally strong. Carton size is reduced because cylindrical shapes waste no space. And, of course, Anchorglass Boston Rounds cost less than non-standard designs.

Add all the merchandising and store display possibilities, and you have all the reasons that you need for using Anchorglass standard Boston Rounds.

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

better your sales to males

...with VUEPAK

Package fabricated by Shaw-Randall, Inc., Pawtucket, Rhode Island

Men, too, respond better, the better they can see the product.

The fact is made clear once again in this new full-view package made of Vuepak by Huntsman . . . in that fast-moving field of men's toiletries.

In a handsome "showcase" of Vuepak . . . transparent and rigid . . . all the sales allure of the merchandise is fully displayed, fully protected. Retailers like Vuepak'd products better, too, . . . they resist shop wear, they maintain their price better, they stack and display better, they cut sales time and sales costs.

If you're selling *either* men or women . . . if your product's good to look at . . . it's smart to put it on view in Vuepak. Your box supplier can give you Vuepak details . . . or write direct: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Mass. In Canada, Monsanto Ltd., Montreal, Toronto, Vancouver.

QUESTIONS AND ANSWERS ON VUEPAK

1. What is Vuepak? Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.
2. In what form is Vuepak available? In sheets up to 30" wide, and in continuous rolls 30" wide up to 1000 ft. long, in thicknesses up to .015". Available in .020" thickness in rolls with unit finish or in 20" x 50" press polished sheets.
3. In what thicknesses is it ordinarily available? In six standard gauges 0.005" to 0.020".
4. Does sunlight affect it? No.
5. Is it affected by heat? Not under ordinary temperatures. It begins to soften after 200° F. Underwriters' Laboratories classification, "slow burning."
6. How can it be fabricated? It can be drawn, shaped, formed or folded into almost any shape with inexpensive dies. It can be embossed, stapled, printed, cemented, or combined with other materials.

*Vuepak: Reg. U. S. Pat. Off.

MONSANTO PLASTICS
SERVING INDUSTRY WHICH SERVES MANKIND

VUEPAK
TRANSPARENT PACKAGING MATERIAL

therapeutic value for his product. In some cases the addition has caused irritation or reaction's in sensitive persons, and the Council on Dental Therapeutics has come out strongly against the claims of various dentifrices, with the contention that such statements are misleading.

Generally speaking, a dentifrice should be free from gritty particles and harmful abrasives. It should have a pleasant taste, cleansing power and leave a pleasing after-effect. Proper antiseptics do aid in keeping the teeth and gums healthy.

While there are scores of brands on the market, only a dozen or so are of real commercial importance. Market surveys conducted recently in various sections of the country show that Colgate is the most widely used of the tooth pastes, 30 per cent of those questioned used it. Ipana of "pink tooth brush" fame preferred by 21 per cent. Third, Pepsodent "irium, Bob Hope," 20 per cent. Listerine "for bad breath," 8 per cent. Squibb 3 per cent. Kolynos also 3 per cent, and Phillips 2 per cent.

Among the tooth powders, Dr. Lyons was the most widely used, 30 per cent. Colgate second in popularity with 25 per cent. Pepsodent, 22 per cent. Calox, 5 per cent, a major portion of Calox sales were in the ten cent units.

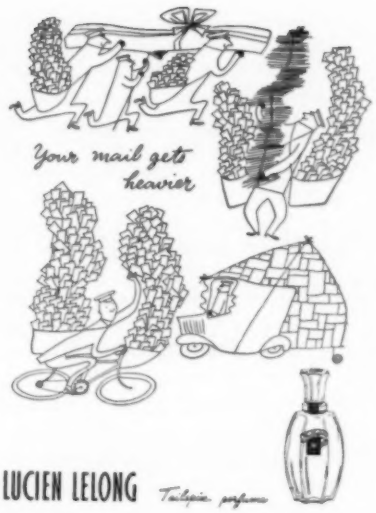
As for the liquid tooth dentifrices. Teel led in popularity with 83 per cent of the respondents using it. Craig-Martin came second with 5 per cent. Cue third with 4 per cent.

Approximately 85 per cent of the people in the United States use some form of dentifrice. The heaviest users of these dentifrices being among the younger age groups. During the war the habit caught on with the men in the service, and was one of the factors that contributed to the vast increase in dentifrice sales.

In surveys covering both city, smaller towns and rural areas in regard to use of dentifrices, it was found that there is not much of a variation in their use. The percentages in all three areas are about the same with the bigger cities leading by a small margin.

There was also very little variation in the percentages of families of different incomes who purchased dentifrices.

Sales of dentifrices led in drug stores, with 64 per cent of all purchases made there. Variety stores came second with a total of 23 per cent. Department stores did only 6 per cent of the total.

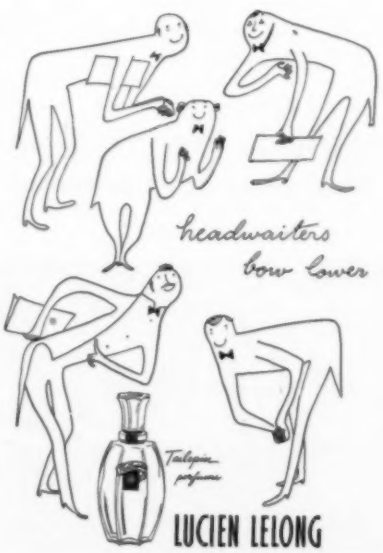


All This and Headwaiters Too

The ads currently appearing in the New Yorker magazine, suggesting the pleasant possibilities that might happen to a woman if she uses Lelong's perfume, "Tailspin," are another series that poke fun at the torrid promises so many perfume houses make.

Drawn by Ian Balet, the various advertisements suggest a woman's "mail will be heavier," "her phone will ring oftener," "she will see more etching," "headwaiters will bow lower," there would have even been more hats in the hallway, if you-know-who hadn't come out with it first.

It's all in good fun and a woman can take it either way, depending which is stronger, her hope or her sense of humor. Anyway we think it will sell lots of Tailspin perfume.



Paper Box Production

A more equitable basis for supply and demand in the paper box industry is indicated for 1947, A. E. Murphy, executive director of the Folding Paper Box Association of America, said as orders received in November registered more than a seasonal decline.

While orders dipped, production was maintained and the backlog reduced slightly. However, the accumulated orders now amount to approximately three months of production for the industry as a whole.

Production of paper boxes for 1946 was estimated to have exceeded 2,000,000 tons, the highest annual output in the industry's history and the first time it has crossed the 2,000,000 mark.

The output record shows an increase of 15 per cent over 1945, when production was 1,835,000 tons. Tonnage for 1945 was nearly 67 per cent greater than the annual average from 1936 to 1939.

In spite of the decline in orders during November and the continuing of the trend in December, it is estimated that the total volume of orders for 1946 would exceed 1945 by 25 per cent.

Shaggy Dog Story?

Perhaps some subscriber can help this advertising agency. They are trying to find out how many women have hair on their legs, by income groups. Whatever we know on this subject, it has nothing to do with income.

Leisure Time Production

The creation of new chemicals and synthetics by research has almost stopped being news. Nowadays it almost takes something like penicillin or streptomycin to arose a flicker of editorial interest.

But just recently a modest advertisement in the *New York Times* even more modestly announced a synthesis, which even if it fails to cause a ripple of interest in the chemical industry, at least stirs a feeling of regret for a lost and unrealized opportunity among a few of us.

The U. S. Testing Co., Inc. of Hoboken, New Jersey, is in the interesting business of making perspiration tests for industrial merchandise. In their "sweat chamber" they put such products as shoe linings, suit linings, dress shields, etc. through the works to see what will happen to them when exposed to human perspiration. This company now proudly announces that they have perfected

Beauty of design that lends glamour to your product.

Sturdiness and durability that insures you against undue shipping loss.

Uniformity that means rigid adherence to high standards.

Dependability that insists that performance match the promise.

SUM IT ALL UP IN ONE WORD:

Quality---

100 years of experience and "know how" backs our sincere assurance of quality—in stock or private mould bottles, machine or hand made.

SWINDELL BROTHERS, Inc.

200 FIFTH AVE., NEW YORK ★ BALTIMORE 30, MARYLAND ★ ROBERTO ORTIZ • HAVANA, CUBA

Swindell

Latest addition to the Golden Arrow toiletries line is "Good-Day" foundation, a rich, creamy liquid in three shades, light, medium and dark.

a synthetic perspiration which has the identical chemical reaction of human perspiration.

Now here is the point. They also stated in this advertisement that they formerly purchased human perspiration for $50 per quart. Anyone who recalls, as this writer does vividly, some of those hot boiling Saturdays and Sundays of last and previous summers when they were out in the suburban garden, stripped to the waist with a towel tied around the waist, so that they could regularly wipe the streams that were pouring down from the head and filling the eyes, can't help but reflect that if they had only known about this $50 a quart market it would have been much more interesting to work around the garden with a bucket in one hand and a sponge in the other. Our recollection may be a little bit off from the actual production figures, but it certainly seems reasonable that we could have worked out about $50.00 an hour on any of the two week-end days. I feel sure that if this company had only let it leak out a little more generally that they were paying $50.00 a quart for human perspiration, they would have been swamped by a tidal wave of perspiration from every suburb.

Curtailed Bottle Output

Representatives of the glass making industry have stated they were operating at capacity, depending on material shortages and the fact that, because of the wartime effort, some facilities were closed down for rehabilitation.

Commenting on the 15 per cent cutback in their allocation of soda ash next year, which is expected to reduce the supply of glass containers available to the drug industry for essential prescription items, it was pointed out that it is not yet known whether the cutback will be translated into an equal percentage curtailment of output. It was said that without material shortages, the industry could turn out 125,000,000 gross in 1947, compared with 115,000,000 in 1946 and 106,000,000 in 1945.

Carriage Trade

One company out to cash in on the luxury market is newcomer Sherry Dunn, Inc., Los Angeles, who claims to have the most expensive perfume in the world.

With imported French ingredients and fancy packaging, it is designed by owner Eugene Dunn's wife, Frances, who has also designed for a number of American perfume houses.

The company has four scents, three for women and one for men. Macabre a heavy odor, comes in a dagger-shaped package and sells for $18.50 a dram. The outer case has a suede finish, with an oriental mask in the lid, and can double as a jewel case.

Violin Suite, a lighter scent ($22.50, two drams, is set in a lucite violin, along with a violin bow which holds a supply of the perfume for carrying in the purse. It is packaged in a miniature replica of a violin case. Scarlet Street, a cologne packaged in a bottle that looks like a street lamp. The men's line consists of an essence called En Garde ($22.50 for 10 ounces), and an after shave lotion, not yet priced.

Kempton Paine is introducing a line of bath accessories called "Anacachio Mist," well packaged, and with a distinctive, fresh fragrance.

Perfume Dispenser

Streamlined and no bigger than an ordinary lipstick, the Atomette perfume dispenser is designed to hold one dram of perfume and to release a single drop at a time.

The main feature of Atomette is its inner glass vial, for grass is said to be the only container that will not affect perfume of any kind. This vial is set in a polished black case, topped by a gold plated cap that keeps the dispenser from clogging with tobacco grains and the like. Remove the cap, press the top down with finger and one drop comes out. No applicator, no fuss.

Designs range from $2 to special gift assortments of $5 to $60.

Mme. Huntingford's newly designed packages are soft gray with caps and lettering in white. In addition to new packaging, Mme. Huntingford is introducing Lustrous Look, a new liquid make-up.

Schiaparelli offers new Shocking creams as basic beauty aids. Creams and Foundation Tint come in gleaming, golden-topped Shocking pink jars, while the skin freshener is in the dressmaker dummy pink bottle.

Neat...handsome...serviceable—the "HIS" shaving soap bowl of Plaskon melamine now is helping stimulate sales for THE HOUSE FOR MEN, INC. Molded in an eye-catching shape . . . of a distinctive masculine color . . . the "HIS" bowl is another example of how versatile Plaskon plastics are serving the design and utilitarian needs of America's drug and cosmetic manufacturers. Plaskon molding compound is particularly adapted to products of this type, where resistance to water is essential. Both Plaskon urea-formaldehyde and melamine-formaldehyde molding compounds are completely impervious to the effects of alcohol, acetone or other common organic solvents. They are not affected by oils, fats or greases.

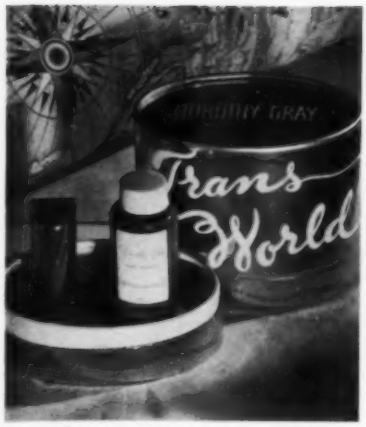
Write for free illustrated book showing many uses of Plaskon* urea-formaldehyde and melamine-formaldehyde molding compounds in manufacturing and merchandising.

PLASKON DIVISION, Libbey•Owens•Ford Glass Company, 2110 Sylvan Avenue, Toledo, Ohio
In Canada: Canadian Industries, Ltd., Montreal, P. Q.

*Reg. U.S. Pat. Off.

PLASKON
TRADE MARK REGISTERED
MOLDED COLOR

Famous Plastics
FOR FAMOUS MERCHANDISE



Trans-World make-up by Dorothy Gray is a red-red with no distracting elements of yellow or blue, packaged in gleaming gold and embossed with flowing white letters.

Primrose House presents Primrose Bouquet cologne, a whisper of violet fragrance captured in a graceful, dainty bottle topped by a pink ball cap.

Absent since the war, Le Dandy D'Orsay now comes encased in a handsome package which bears the Chevalier D'Orsay crest and is done in richly embossed white.

For The Man Most Likely To Succeed

Beau Brummell's new toiletries for men "Galanterie" packaged in compact, unbreakable, aluminum flasks. Available in two sizes, the Executive and the Traveler, there is a cologne, after shave lotion, hair dressing, talcum and deodorant.

They come in sets of two, three or singly, in American Beauty Red or King Blue Beauswade boxes. The set of all five in a deluxe kit retails at $15.00 for the Executive size and $10.50 in the Travelers size.

Matched Make-Up

Tattoo, a product of 5 Day Laboratories, is being launched this month with a new line of matched make-up, priced to reach the mass market.

In twelve colors, Tattoo Nail-Namel will retail at 39 cents, with matched shades of lipstick at 59 cents. Six shades of dry rouge at 49 cents, and mascara at 59 cents. Lustre-Coat, a base and top coat for nail enamel at 39 cents, complete the line.

Innovation in container design give Tattoo added features. The nail enamel has a two and a half-inch brush top, providing easy application of lacquer. The "no-tip" bottle is an additional selling feature.

Tattoo advertising is based on legends of the South seas. Shade names are keyed to the tropical theme—Hula Pink, Tahiti Fire, Scarlet Lelani, etc.

Versatile Tekwood

Tekwood, made of hardwood core sandiched between and bonded to two tough sheets of cylinder kraft paper and in construction is similar to plywood. Like plywood, it gains strength from cross-grained, laminated, three-ply wood and paper layers, but Tekwood has the added advantage of flexibility.

Workability in the material is indicated by its ability to bend to any angle without rupture of core or outer plies. An outstanding feature of Tekwood is that it die cuts cleanly without splintering or leaving rough edges, lends itself to design, advertising or decoration purposes for containers for perfumes, soap, toiletries. A Tekwood box designed for perfume or soap, could continue use as a handkerchief or tissue b ox, after the product has been removed.

Prince Matchabelli has created a romantic little package especially for Valentine's Day, holding a two-dram crown of Crown Jewel, Stradivari or Duchess of York.

Tattoo offered by 5 Day Laboratories has a nail enamel in twelve colors with matched lipstick shades. Feature of the nail enamel is the no-tip bottle.

Peggy Sage has created Shimmer lipstick to match Shimmer Sheen and regular nail polish. Moist-textured with a high lustre, it comes in a handsome metal case.

head to heels

. . . PROTECTED

With his catcher's mask, protector and shinguards, this ballplayer is ready for action. From head to heels, he's protected.

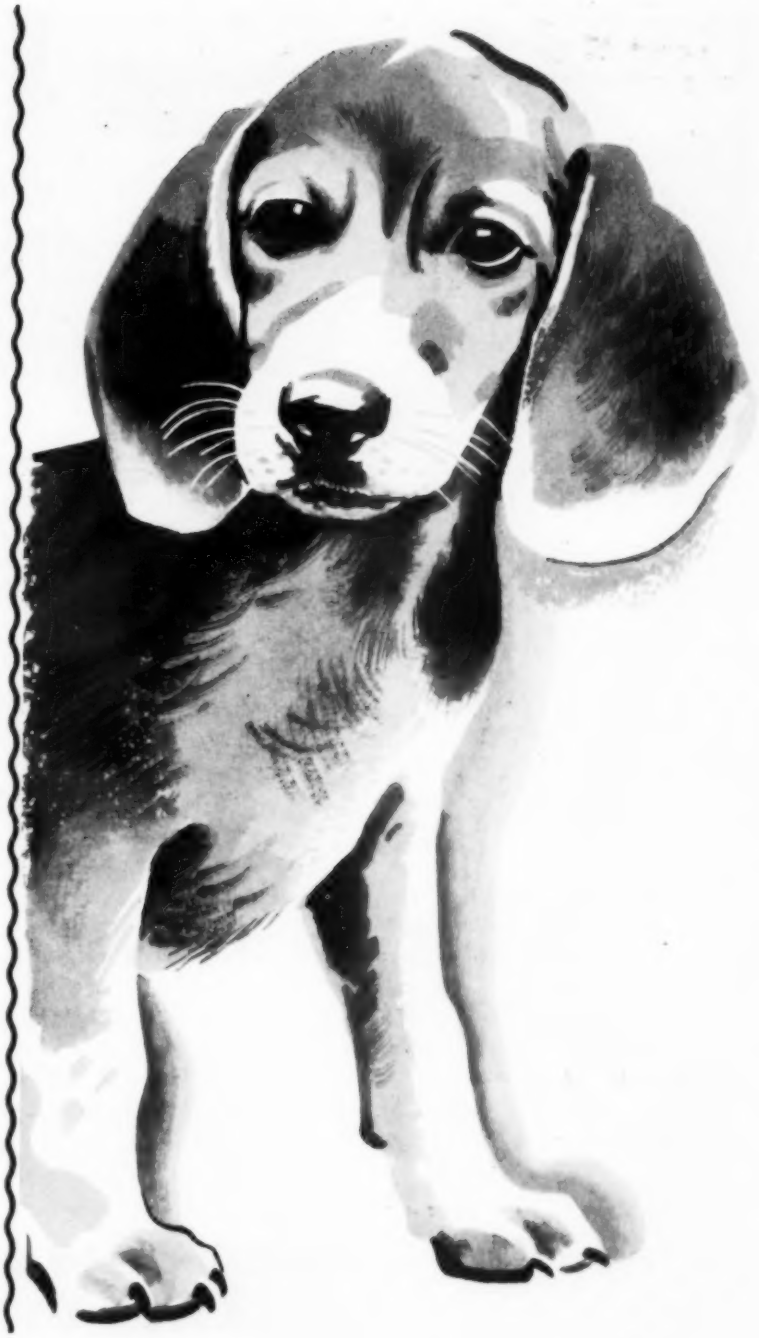
Thanks to the same kind of top-to-bottom protection, National cans are ready for service . . . providing all-around resistance to hard knocks . . . assuring your product's safe arrival.

National Can engineers have been busily and ingeniously solving special problems for individual can users. They are ready to help you whenever you tell them what's on your mind.

NATIONAL CAN
CORPORATION

EXECUTIVE OFFICES: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

Sales Offices and Plants: Baltimore, Md. • Chicago, Ill. • Hamilton, Ohio • Boston, Mass. Detroit, Michigan • Indianapolis, Ind. • Maspeth, New York • McKeesport, Pa. • St. Louis, Mo.



EYE APPEAL
that wins friends...

Confidence in drug and cosmetic products often stems from the eye appeal of the package.

That is why so many customers are won by Marion Ovals. Their sparkling clarity and dignified design win lifelong friends at first glance.

Demand for these quality containers is exceptionally heavy. It will therefore pay you to anticipate your needs at the earliest possible moment.

FOSTER-FORBES GLASS COMPANY

MARION, INDIANA, U S A.

Sales Representatives

ST LOUIS • NEW YORK • CINCINNATI • DETROIT • CHICAGO • CLEVELAND • ST. PAUL
MILWAUKEE • ATLANTA • KANSAS CITY • MEMPHIS • LOUISVILLE • HAVANA, CUBA

perfume flacons . . . by carr-lowrey

. . . worthy containers for the most exotic scents

Distinctive handmade bottles give an added touch of luxury to products that require the finest packaging. Like all Carr-Lowrey containers, they are made to exceptionally high standards of uniformity and quality.

Carr-Lowrey is one of the foremost names in the field of fine glass containers . . . a position earned by more than 57 years of devotion to the highest standards in glass manufacture.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. • *New York Office:* 500 FIFTH AVENUE (18) • *Chicago Office:* 1502 MERCHANDISE MART (54)

OPAL JARS • HANDMADE GLASS BOTTLES • MACHINE MADE FLINT GLASS BOTTLES

For products that justify the finest in glass containers

GOOD NEWS SHOULD TRAVEL FAST....

mrm now makes it practical for all manufacturers to own a fully automatic rotary filler, made with **mrm** simplicity and efficiency. All will welcome this versatile machine because 1) It is fully automatic in operation, 2) It fills varied liquids, container types, and sizes, 3) It is economical in cost, operation, maintenance. It pays for itself!

the NEW mrm

FULLY AUTOMATIC

ROTARY

VACUUM FILLING MACHINE

Fills • Thin • Foamy • Viscous Liquids

OPERATING SPEEDS
60 quarts per minute
80 pints per minute
(smaller containers with proportionate increases in speed)

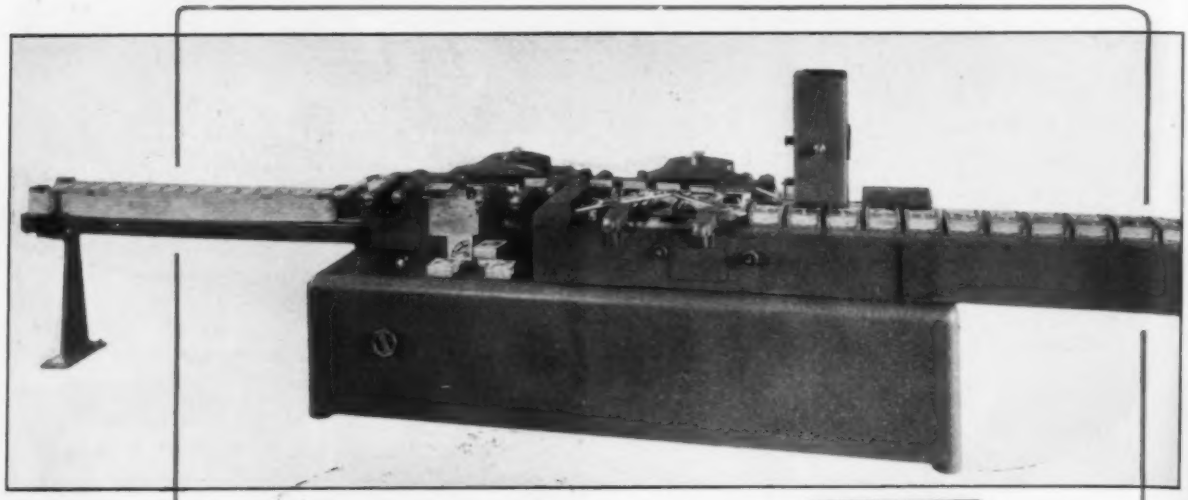
PROMPT DELIVERY
• Fully Automatic: Fills 1 oz. to 1 qt.
• 12 Dripless Spouts.
• Spouts Adapt to Container Variations.
• Fully Automatic Overflow, No Waste.
• Stainless Steel Contact Parts.
• Easy-to-Adjust Variable Speed Drive.
• Rapid Change-Over for New Containers.
• Automatic Intake & Discharge Conveyor.

LET mrm "VISUALIZE" YOUR FILLING MACHINE!

mrm company

CUSTOM DESIGNED & BUILT FILLERS, CAPPERS, CONVEYORS

223 EAST 106th STREET • NEW YORK 29, N. Y. • LEhigh 4-0207-8



ROSS

The new CARTONING MACHINE FOR SEALED CARTONS

THIS new machine is almost identical to the standard ROSS Cartoning machine for tuck-end cartons.

Note the addition of an off-take compression unit and the substitution of glue pots for tucking units.

This ROSS machine, while designed for handling the three envelopes, as illustrated, can be adjusted to smaller or larger packages containing multiple units. (ie: bottles, collapsible tubes, candies, soaps, powder in envelopes, etc.)

All ROSS machines, automatic or semi-automatic, are functionally streamlined, engineered for precision adjustment. All parts made to close tolerances for complete interchangeability.

- PRECISION PARTS
- SELF-OILING
- DIAL CONTROL
- VERSATILE ADJUSTABILITY
- MASTER SPEEDRANGER

WRITE TODAY

A. H. Ross Co., Inc., Ludlow, Ky. 1

Gentlemen: Please send me without obligation, Catalog and Data on ROSS Automatic and Semi-automatic Cartoning Machines.

NAME_____

COMPANY_____

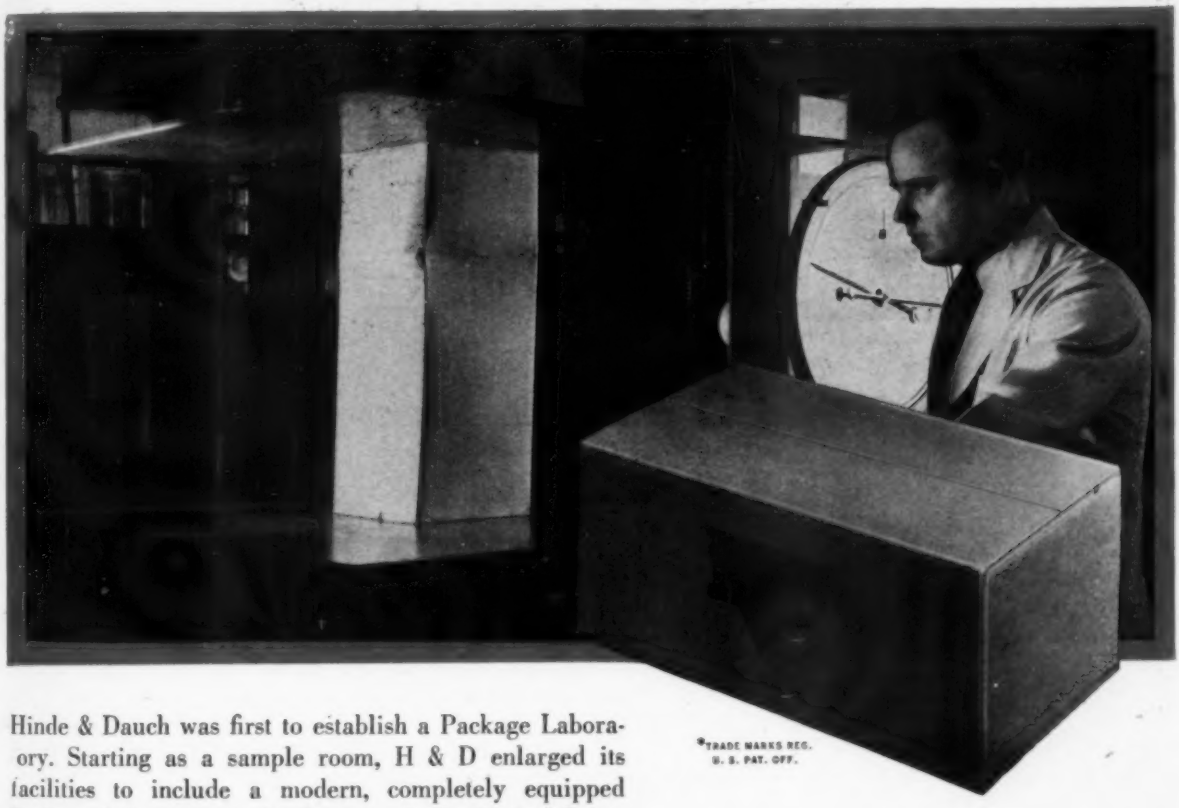
CITY_____ STATE_____

ROSS ROCKWELL SUBSIDIARY OF THE ROCKWELL MANUFACTURING COMPANY

A. H. ROSS Co. Inc.

PACKAGING MACHINERY · LUDLOW, KY.

first to establish a PACKAGE LABORATORY



*TRADE MARKS REG. U. S. PAT. OFF.

Hinde & Dauch was first to establish a Package Laboratory. Starting as a sample room, H & D enlarged its facilities to include a modern, completely equipped Package Laboratory in its factories in the United States and Canada. From the Package Laboratory came the LIFE PRESERVER*, the first baby chick shipping box; the first corrugated box for shipping canned foods; PREPAK*, the first unit package. These and many other H & D "firsts" were developed in the Package Laboratory where scientific construction and design are employed to increase packaging efficiency and reduce packaging costs. The Hinde & Dauch Paper Company, 4701 Decatur Street, Sandusky, Ohio.

LOOK TO

REG. U. S. PAT. OFF.

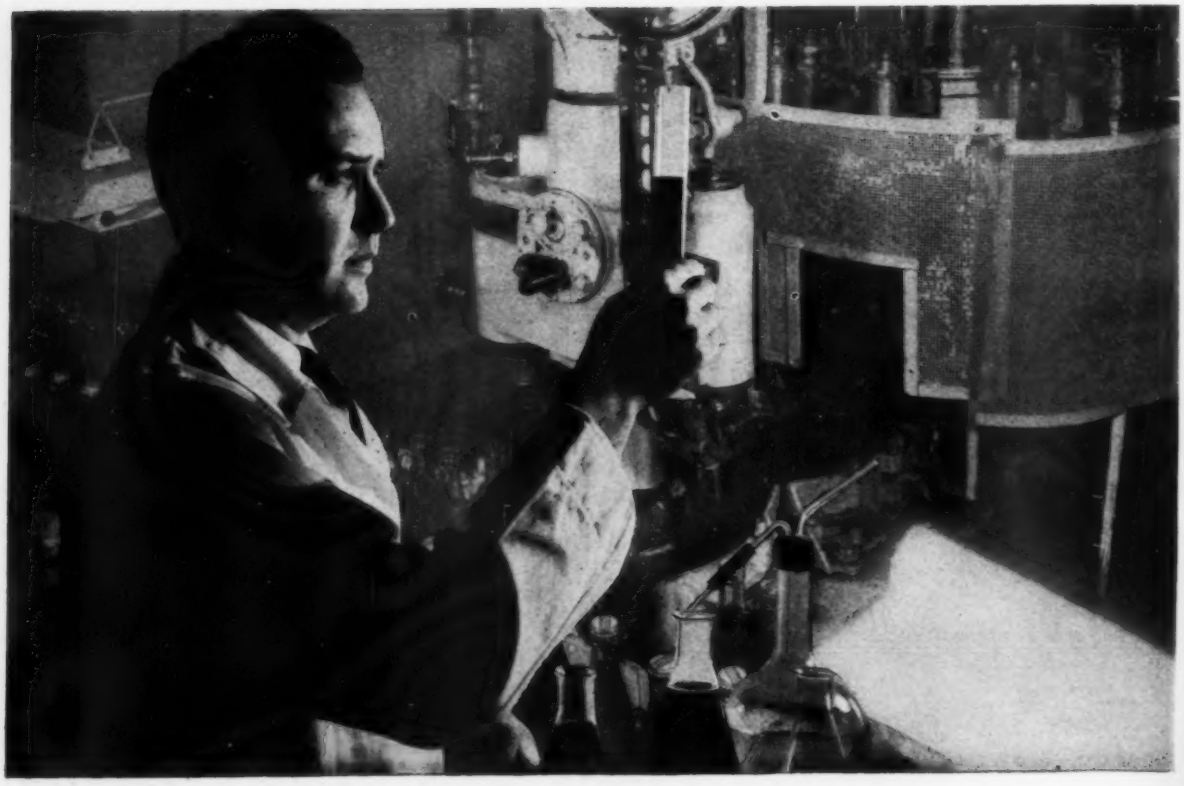
H&D

FOR PACKAGING

"firsts"

HINDE & DAUCH · *Authority on Packaging*

FACTORIES IN: Baltimore 13, Maryland • Buffalo 6, N. Y. • Chicago 32, Illinois • Cleveland 2, Ohio • Detroit 27, Michigan • Gloucester, N. J. • Hoboken N. J. Kansas City 19, Kansas • Lenoir, N. C. • Montreal, Quebec • Richmond 12, Virginia • St. Louis 15, Missouri • Sandusky, Ohio • Toronto, Ontario • Watertown 72 Mass.



HOW DISSOLVING A SPECK SOLVED A GLASS PACKAGING PROBLEM

Not so long ago, one of Armstrong's customers complained that small black specks were showing up in his packaged product. His product was manufactured under unusually rigid controls and filtered before bottling. So naturally he figured that either the bottle or the closure must be the source of the impurity.

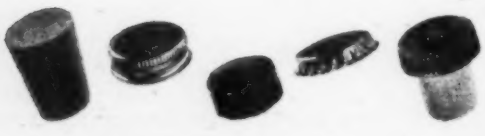
However, careful checking at the Armstrong plant quickly eliminated the bottle itself as a possible source. Since no black material was found in or near the shipping containers, outside dirt was ruled out. The closure liners were white, so they couldn't be guilty. But the closure itself was a black molded cap. Could it be the culprit?

Analysis of the black specks by Armstrong's laboratories said no. The cap material wouldn't dissolve in carbon tetrachloride. But the specks did!

Convinced by Armstrong research that neither the caps nor the bottles could be causing the impurity, the customer tore down his bottling machinery. He discovered that the black specks were dropping from a worn-out gasket high up in one of the filling heads!

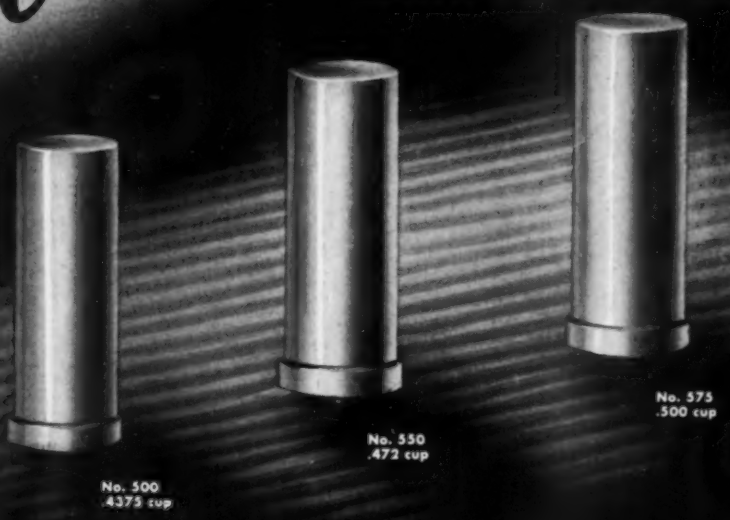
Not all glass packaging problems are so difficult to track down as this one was. Nor do all of them originate in customers' factories! Whatever your problem, and no matter where it originates, you can be sure of getting the finest technical assistance at Armstrong. An unusually large staff of experts in engineering, production service, package design, and the pure and applied sciences is constantly on the job to make sure you get the best in glass and closure service.

For full information on any of Armstrong's glass or closures, or assistance with your packaging problems, call your Armstrong representative. Or write direct to Armstrong Cork Company, Glass and Closure Division, 3301 Prince Street, Lancaster, Penna.



Rich Low BRASS

SWIVEL LIPSTICK CONTAINERS



"Fashioned Like Jewels"

THE ULTIMATE IN QUALITY

- De Luxe polished Rich Low brass — baked lacquer finish
- Free wheeling mechanism — It is impossible for the filler to swivel up while the cap is on
- "Click-Tite" closure*

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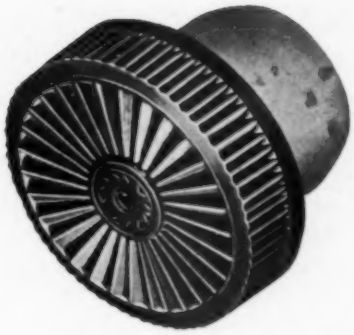
*Patents Pending

We'd give our shirt
to meet your demands!
It seems that no matter how many cans we turn out, we can't make much of a dent in our backlog of orders. We've expanded manufacturing facilities . . . stepped up production . . . put more men on the job. But you know what happens sometimes to the best laid plans. A dozen reasons beyond our control still prevent us from keeping up with your requirements. They range from allocations to obligations. All we can say is . . . when we're able to take care of you the way we'd like to, we'll be happy.
WE'D NEVER SAY "CAN'T" TO YOU, IF WE COULD MAKE CANS FOR YOU
CONTINENTAL
CAN COMPANY



Dodge Milbossed Top Corks

HOLD THE TOP SPOT...

Distinctive Dodge Milbossed Top Corks enable quality products to meet competition where it begins—in the eye-appealing smartness of the package. Smart, colorful Dodge closures can be designed to harmonize with your entire package—starting the sales at the *top*.

Easy-to-draw Dodge Milbossed Top Corks satisfy customers ... help turn initial sales into repeat sales. Here's a closure that seals and reseals without fuss ... provides a perfect, air-tight fit of natural cork. And you'll find that Dodge cork closures protect the quality within the bottle—so important in maintaining top spot status.

If you're interested in dressing up your package to sell—and keep on selling—call on Dodge. Many years of experience make Dodge your logical choice to provide dependable, up-to-the-minute closures designed especially to help sell *your* product.

DODGE CORK COMPANY, INC., LANCASTER, PA.

DODGE CORK *Closures*

Dodge Taper Corks provide an economical, high quality closure that does a perfect sealing job. They are available in all standard sizes to fit a wide variety of bottles.

Designed to Guard the Integrity of the Contents

DRESSED TO SELL

PRODUCTS PACKAGED IN LUSTEROID MEAN "CLEAR SELLING" AHEAD

Your sales job is made easier when your product is "clothed" in sparkling, crystal-clear LUSTEROID.

These modern plastic vials and tubes are actually small showcases that display your product while protecting it in transit, over the counter and in use.

Remarkably light in weight, LUSTEROID containers are strong, rigid and unbreakable. Their printability saves on labeling. Their wide variety of colors—clear or opaque—make them a most effective merchandising medium.

LUSTEROID comes in standard diameters of ¼" to 1¼" and lengths to 6". Cork, slip-on or screw-cap closures.

Write for full details today.

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Formerly Lusteroid Division of Sillcocks-Miller Company

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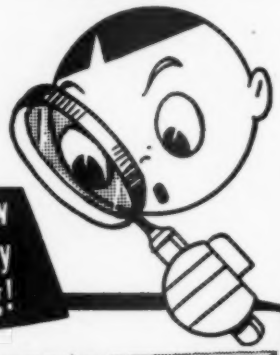

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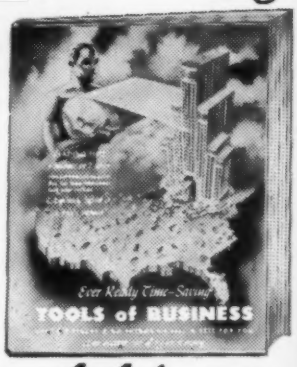

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containers and closures of every description for the cosmetic, drug, chemical and food trades.

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. . . are preferred wherever fine packages are prepared. Any size or shape for face and bath powder, compacts and rouge.

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KIMBLE NEUTRAGLAS CONTAINERS

Ampuls . . . Vials . . . Serum Bottles

The complete container line for parenteral solutions—ampuls, vials, and serum bottles in a wide range of types and sizes, made of Neutraglas for utmost protection and resistance to chemical attack.

• • • *The Visible Guarantee of Invisible Quality* • • •

NO FRAGILE BEAUTY...MERITSEAL

Meritseal's beauty is of the dyed-in-the-wool variety . . . the kind that can "rough it" . . . take all the bumps and come up looking pert and gay. This ability to "take it" is attributable to the extra hard lacquered or lithographed coatings developed by Meritseal's chemists. They afford exceptional resistance to scratching and rubbing. In addition, Meritseal's patented construction and unique thread design assure economical, trouble-free application on the production line. They spin on freely, forming a perfect fitting, air-tight seal.

We'll gladly send samples and complete information. But, as Meritseal comes in nine standard sizes and a wide variety of colors, be sure to mention your preference. When you see Meritseal on your package and look at the price, you'll agree that here is a closure that no manufacturer of quality cosmetics can afford to overlook.

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Division of
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WESTERN REPRESENTATIVE: WESTERN CROWN CORK & SEAL CORPORATION . . . SAN FRANCISCO . . . LOS ANGELES

CUSTOM MADE

Accurately to Your Specifications

● **REGULAR DROPPER** . . . a standard quality dropper made to any desirable size using the best of materials and the finest workmanship. Completely assembled.

● **CALIBRATED DROPPER** . . . accurately made to any graduated scale to insure correct readings. Plastic Cap, Natural or Synthetic Rubber Bulb, No. 2 Clear Glass, Blunt End, Completely Assembled.

● **SERUM DROPPER** . . . can be made to hold any specific number of CC's desired. Expert workmanship assured in each dropper. Completely assembled.

A Dropper to fit Your Every Need!

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PHILADELPHIA PENNSYLVANIA

the BG* is stock that pays off

As you take stock for next year, remember . . .

The BG is a great buyer.

She makes good money on a good job, and spends it to get what she wants.

The BG is young.

She tries things. She is always competing, for success, for attention, contentment, a man. It means so much, between 18 and 30.

The BG is smart.

She must look smart. She plans to do it, and does it beautifully, to the envy of CHARM-less others.

The BG loves CHARM. It's her own magazine. She relies on CHARM to find out what she wants, why it's right for her, how it helps her.

This last year, for instance, CHARM gave the BG more advice on clothes than any other magazine blueprinted for her, because her career and her clothes are close twins.

CHARM actively shapes the Business Girl's life. It sells shoes to her . . . And cosmetics . . . And clothes . . . Pleasant living . . . And places to go.

No magazine in history has ever had more influence upon the American Business Girl's way of life than CHARM, the one magazine built for her. Any store can say so. Manufacturers agree that BG also means "Business Good."

CHARM gives you packaged youth— eager, free-spending, acquiring, home-planning BGs.

Use CHARM, because CHARM means business.

* *Business Girl*

CHARM

THE MAGAZINE FOR THE BUSINESS GIRL

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Calcium Phosphate, Di
Acetyl Salicylic Acid (Aspirin)
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NEWS...

Brooks Buys de Markoff

Herman L. Brooks has purchased the Alexandra de Markoff Facial Preparations Company and affiliated companies, Alexa Perfumes and Prince George Men's Lines.

H. L. BROOKS

Martin de Markoff, the founder of the business, will continue to assist in the packaging, designing and creation of new products. The showroom and offices will remain at 642 Fifth Ave., New York.

Brown Named Sales Manager

Charles K. Brown, associated with Sterling Drug Inc., since 1928, has been named sales mamager of the R. L. Watkins Company Div.

CHARLES BROWN

Mr. Brown first joined Sterling Drug Inc., as a sales representative of the Bayer Company Div. He continued in that capacity until 1944, becoming a Bayer-Watkins representative when the field representatives of both divisions were consolidated in 1942. Since September 1944, Mr. Brown has served as assistant sales manager of the division. As sales manager, he will continue to make his headquarters at 170 Varick St., New York.

Kremers-Urban Co. Acquired by Miller & Johns

Negotiations covering a period of several months have been terminated in the acquisition by C. O. Miller and Ray A. Johns of the controlling interest of Kremers-Urban Co., Milwaukee.

The Kremers-Urban Co., was founded in 1894 by Albert and Ernst W. Kremers, and Leo C. Urban. The company has specialized in the manufacture of pharmaceuticals. Ernst Kremers served as president until his death in 1942. John Kremers succeeded his brother as president and served in that capacity until the time of sale.

Both Dr. Miller and Mr. Johns have had wide experience in the drug industry. Dr. Miller has been scientific director and vice-president of Lakeside Laboratories since 1938 and Mr. Johns was comptroller and treasurer of that organization since 1939.

Dr. Miller received his Ph.D. in chemistry from the University of Chicago. Following graduation, he was instructor in chemistry at the University for four years and assistant professor of physiological chemical at Northwestern University Medical School for eight years.

O'Connor Joins Schering Board

Francis C. Brown, president of Schering Corporation, Bloomfield, N. J., has announced the appointment of Basil O'Connor as a new member of the Schering board of directors. Mr. O'Connor is chairman of the American National Red Cross and president of the National Foundation for Infantile Paralysis. He was also the former partner of the late President in the law firm of Roosevelt and O'Connor.

A native of New England, 54 years of age, Mr. O'Connor graduated from Dartmouth College in 1912 and Harvard Law School in 1915.

Bigelow Elected Chairman of DCAT

The Drug, Chemical and Allied Trades Section of the New York Board of Trade has elected officers to serve during the next fiscal year.

Dr. Carle M. Bigelow, Calco Chemical division of the American Cyanamid Company, was elected chairman; Fred J. Stock, vice president, Chas. Pfizer & Co., Inc., vice chairman; Hugh S. Crossman, McKesson & Robbins, Inc. treasurer; Helen L. Booth, New York Board of Trade, Inc., secretary; Carl M. Anderson, assistant to the president, Merck & Co., Inc., was re-appointed counsel.

DR. C. M. BIGELOW

The retiring chairman, Harold M. Altshul, was presented with an engraved gavel in recognition for his services during the past year.

Brodsky Heads Pepsodent Adv.

Frank R. Brodsky has been named as the new director of advertising for the Pepsodent Division of Lever Brothers Company.

FRANK R. BRODSKY

Mr. Brodsky, who joined Pepsodent in 1945, takes the position left vacant by the promotion of George R. Stege, Jr., former director of advertising and merchandising, to director of sales.

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COLUMBIA 19, S. C.

LeBar Appointed Manager

William LeBar has been appointed manager of retail sales for Winthrop Chemical Company, Inc., and will make his headquarters at 170 Varick St., N. Y. He is succeeded as manager of Winthrop's Metropolitan A division, by J. Gilbert Thomas, recently manager of the Winthrop branch in Manila.

Mr. LeBar has been associated with the company for 12 years. A graduate of the Philadelphia College of Pharmacy in 1931, he spent four years as a retail druggist before joining Winthrop as professional service representative covering New England.

Mr. Thomas, after graduating from the University of Pittsburgh with a BS in 1930 and an MS in 1932, was associated with a research laboratory before joining Winthrop in 1938. In 1941 he opened a branch office in Honolulu, and was in Manila in 1942 when the city was taken by the Japanese. He spent three years in the Santa Tomas prison camp.

Theile Joins Dreyer Labs.

Frederick C. Theile, Jr., has become associated with P. R. Dreyer Inc., in the chemical laboratories. Mr. Theile is a graduate of Rutgers and did confidential work in the Naval Laboratories in Washington during the war.

Bristol-Myers Appoints Lathrop

Palmer J. Lathrop has been named plant manager of the Bristol-Myers' plant at Hillside, N. J. A native of Scranton, Pa., Mr. Lathrop graduated from Princeton. He joined Bristol-Myers in 1931, where he became production manager and also had charge of work simplification practices.

Commissioned as a Lieutenant in the

PALMER J. LATHROP

Air Force in 1942, he served three years with the Alaskan division of the Air Transport Command, leaving the service in 1946 with the rank of Major.

Johns Advanced by Royal

Frederic J. Trump, president of Royal Pharmacal Corporation, has announced the appointment of William H. Johns as general sales manager. Mr. Johns will centralize all sales activities of Royal's Brooklyn, Duquense, and Chicago sales offices.

Mr. Trump also announced the addition of Irving Michaels to the executive staff of Royal. Michaels was formerly sales manager of the American Druggists Syndicate, Inc. His headquarters will be in the general offices at 100 Somers St., Brooklyn, N. Y.

Leonard Elected President of Sun Tube Corp.

Raymond R. Leonard has been elected president of the Sun Tube Corporation, Hillside, N. J. He succeeds Willis M. Rose who has retired.

Mr. Leonard has been for the last year plant manager of the Hillside plant

RAYMOND LEONARD

of the Bristol-Myers, of which Sun Tube Corporation is a wholly-owned subsidiary. A native of Boston, he is a graduate of Bowdoin College, later taking his law degree at St. John's University, Brooklyn.

He became associated with Bristol-Myers in 1943, as director of plant personnel and was appointed plant manager in December 1945.

Heyden Plans New Construction

Construction of a $450,000 fine chemicals building as an addition to the Hayden Chemical Corporation plant at Fords, N. J., has been announced.

Of brick, steel and concrete construction, the new building will provide an additional 5,000 square feet of floor space to be used in the production of organic chemicals. It will be two stories high, except for the tower portion which will rise five stories to accommodate twin fractionating columns.

Gaunt Named Technical Director

Dr. William E. Gaunt has been appointed technical director and head of the division of product development of

DR. WILLIAM GAUNT

the New Brunswick Manufacturing Laboratories of E. R. Squibb & Sons.

Dr. Gaunt, associate of the Royal Institute of Chemistry, member of the Royal Society of Medicine, was formerly senior chemist of the Imperial Chemical Industries Ltd., and chief chemist and research director of the Ashe Laboratories, Ltd.

Speel Joins Alrose Chem. Co.

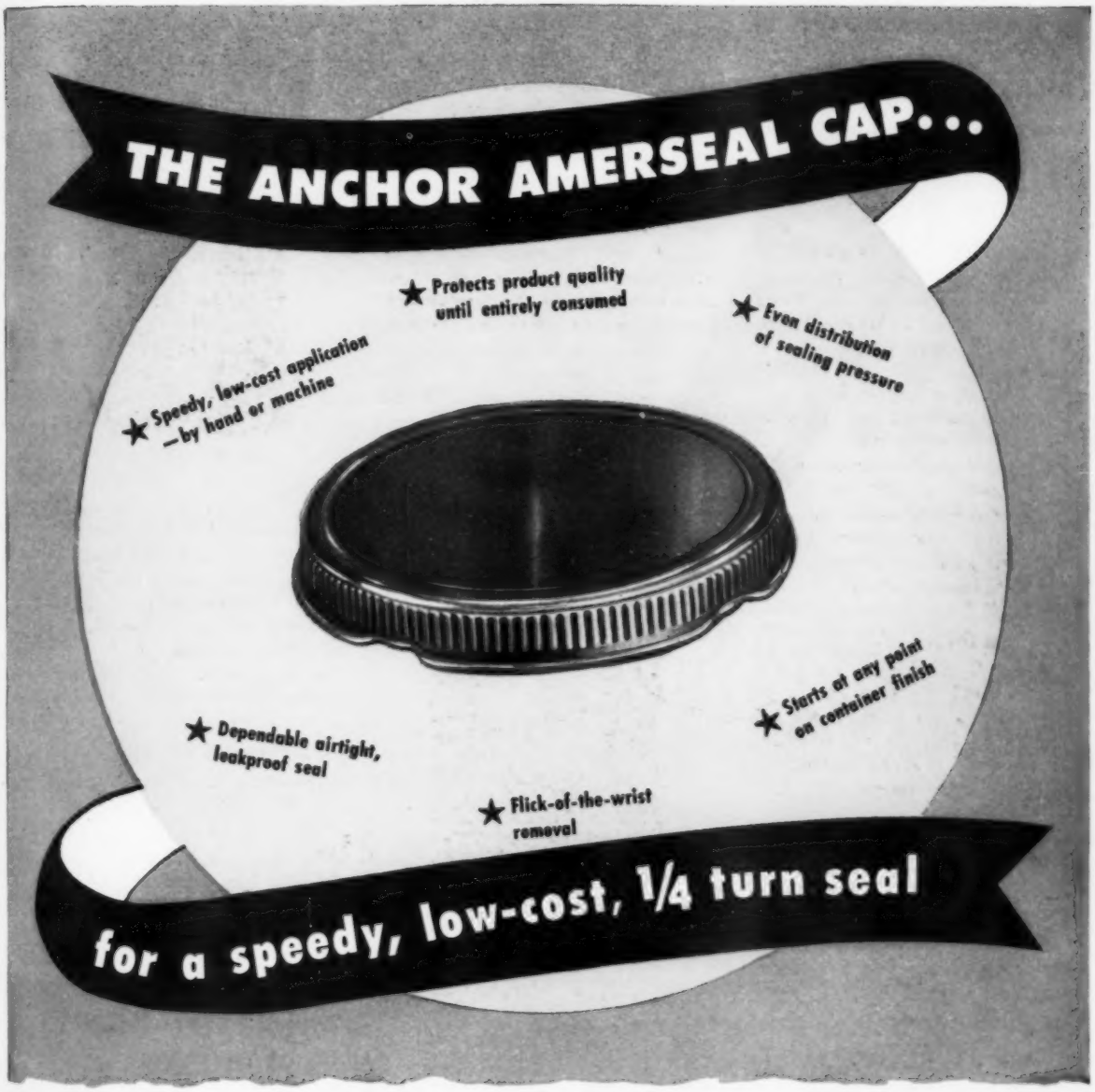
Henry C. Speel, formerly with General Mills of Minneapolis, has joined the staff of the Alrose Chemical Co., Providence, R. I.

A graduate of Harvard in 1930, Mr. Speel was a member of the research department of General Mills, engaged in new chemical product development. Prior to that he was associated with the Atlas Powder Co., for a number of years and played an important part in the development of uses for Mannitol, Sorbitol, and their derivatives.

Allied Drug & Cosmetic Assn. of Mich. Elect Officer

The Allied Drug & Cosmetic Association of Michigan, held their annual Christmas party at the Book Cadillac Hotel, Detroit.

Officers for 1947 were introduced during the dinner that followed the presidents reception; President, Stewart Cowell, J. T. Baker Chemical Co.; Vice president, John K. Stevenson, R. M. Stevenson Co.; Secretary, A. S. Bedell, Beauty Counsellors, Inc.; Treasurer, L. R. Farnum, Gelatin Products Co.; F. H. Yost, Jr., Dow Chemical Co., and Thos. Knowles, Standard Brands, Inc., will serve on the executive committee with the retiring president M. G. DeNavarre.


THE ANCHOR AMERSEAL CAP...
★ Protects product quality until entirely consumed
★ Even distribution of sealing pressure
★ Speedy, low-cost application —by hand or machine
★ Starts at any point on container finish
★ Dependable airtight, leakproof seal
★ Flick-of-the-wrist removal
for a speedy, low-cost, 1/4 turn seal

THE Anchor Amerseal Cap starts at any point on the container finish. Then it's the simple ¼ *turn* that permits easy application, speeds up production, reduces costs.

And this cap gives your products a dependable airtight, leakproof seal because it exerts a uniform sealing pressure around the full 360 degrees of the container finish. Its equally-spaced, scientifically-designed lugs engage the *underside* of the glass threads and draw the cap down, compressing the liner into a tight, even seal.

The Anchor Amerseal Cap offers the ultimate in convenience to the consumer with its flick-of-the-wrist removal and reseal. A ¼ turn and it's off—a ¼ turn and it's on again — sealing as effectively the hundredth time as the first.

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

BRASS
SWIVEL LIPSTICK CONTAINERS
Weston offers you—Now—superbly fashioned containers, each an eye-catching merchandiser by itself. Submit your own specifications for "made to order" caps in any style you wish, or see the creations of Weston's master designers. Whatever your choice, you are assured of lipstick containers built to the Weston standard of outstanding style and performance.
Weston's modern factory, housing a battery of giant eyelet machines, makes it possible to supply these containers in volume, with resulting price savings. The Weston policy of maximum production in minimum time provides the answer to your quality container needs.
PHONE, WIRE OR WRITE FOR SAMPLES
LIPSTICK CONTAINER DIVISION
WESTON INTERNATIONAL CORPORATION
85 East 10th Street . . . New York 3, N. Y.

Allies Honor Justesen

Paul Justesen, of the export department in the New York Office of Albert Verley & Company, has received cita-

PAUL JUSTESEN

tions from the governments of United States and Great Britain for his services during the war in aiding the escape of Allied soldiers from the enemy.

Mr. Justensen, a Danish citizen, was in Denmark during the German occupation, acting as manager of the Wine & Alcohol Section of the Danish Cooperative Wholesale Society in Copenhagen.

He became a member of the Resistance Movements Council for Sealand military organization and worked closely with "Special Forces," housing the allied agents who were dropped in Denmark by parachute, helping them organize espionage, sabotage, etc.

In June 1944, Mr. Justensen and his family had to go underground as their activities became known to the Germans, but in September he was nevertheless arrested by the Gestapo who had learned he was to meet an English agent in a restaurant.

He was sent to the concentration camp "Neuengamme" near Hamburg. His wife and friends succeeded in contacting a friendly German police officer who falsified some documents and by this means Mr. Justensen was released and came back to Copenhagen. The Gestapo discovered that he had escaped from the camp, and he was obliged to flee to Sweden where he arrived in the bottom of a coal boat in March 1945.

In Sweden he joined the Danish forces and when the Germans in Denmark capitulated, he returned to Copenhagen.

In October of 1945, he came to America on business and happened to meet E. J. Strobl of the Verley Company. This resulted in his coming back again with his family as emigrants and he has been export manager of Albert Verley & Company in conjunction with R. Grueter since then.

Robinson-Wagner Expansion

Plans for increasing production facilities at the Mamaroneck, N. Y., plant have been announced by A. Wagner, president of the Robinson Wagner Company. When enlargement of present manufacturing facilities is completed, the plant will have the largest capacity in this country for producing lanolin.

MacDonald Heads Ungerer's Los Angeles Office

Ungerer & Company, Inc., has opened a new branch office at 3757 Wilshire Blvd., Los Angeles 5. George R. MacDonald of Boston, for many years the New England representative of Ungerer & Company has been named manager of the Pacific Coast office.

DeMerell, Vice President of Anchor Hocking

W. V. Fisher, president of Anchor Hocking Glass Corporation, Lancaster,

S. B. DEMERELL

Ohio, has announced that S. B. DeMerell was elected a vice president at a directors meeting.

Mr. DeMerell joined the Capstan Glass Company, an affiliate of the Anchor Cap & Closure Corporation, as sales manager in 1925. Following the merger of the Anchor Corporation with the Hocking Glass Company and its subsidiaries under the name Anchor Hocking Glass Corporation in 1937, Mr. DeMerell continued as sales manager of the container division.

In his newly elected position, Mr. DeMerell will be vice president and director of package sales for the container and Closure divisions.

Sharp & Dohme Expansion

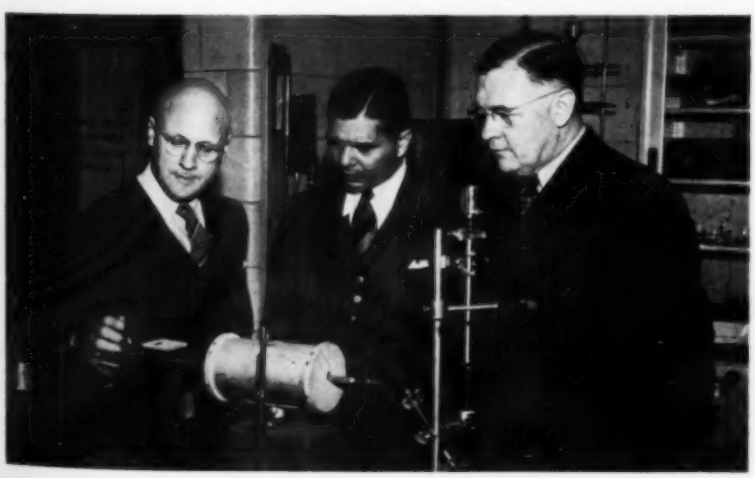
John S. Zinsser, Sharp & Dohme president, has announced that the Company has leased a group of three buildings at 5th and Bristol Streets in Philadelphia, occupied during the war by the Army Signal Corps.

Total floor space of the buildings is 266,000 square feet. They include a main building, a large garage and a power plant.

Plans are to use the space for finished stock warehousing, storage of packaging supplies and for the Philadelphia district sales office, which will leave its present location at 1409 North Broad Street.

Wade Joins San Antonio Drug Co.

The Drug, Chemical & Allied Trades Assn., of St. Louis, gave a farewell party December 28, at the De Sota Hotel for George Clifford Wade, before he left to take up his new duties as merchandise and sales manager of the San Antonio Drug Company, San Antonio, Texas.



The Iranian delegate to the United Nations' Health Conference, Dr. H. Hafezi, (center) shown at the Abbott Laboratories with E. F. Shelberg, (left) chief microanalyst and E. B. Vliet, manager of the control laboratories.

116 WEST 14TH STREET, NEW YORK 11, N.Y.
PHONE: CHELSEA 3-6233 — CABLE: FURLAGMAN, N.Y.

Stearns Appointments

The appointment of Earl L. Burbidge, M.D., medical director, and Ralph Henderson, assistant to the vice president of the Frederick Stearns & Co.,

EARL BURBIDGE

division, Sterling Drug Inc., as divisional vice presidents, has been announced by Dr. J. Mark Hiebert, vice president and general manager. At the same time it was announced that John W. Kribs, personnel director and office manager, has been named assistant treasurer of the division.

Mr. Henderson became assistant to Dr. Hiebert in February, 1945, to supervise the Windsor plant of Frederick Stearns & Company of Canada Ltd. As divisional vice president, he will continue in charge of the Canadian operation.

Dr. Burbidge has been medical director of the division since June 1944 and has been closely associated with the development of clinical research on proteins and amino acids as well as on a series of sympathomimetic drugs. Prior to his association with Stearns, he was for three years associate director of the medical research division of Sharp & Dohme.

Mr. Kribs has been associated with Stearns since 1923. He began work in the factory, becoming subsequently head of the tabulating department and assistant office manager in 1939. He was named office manager in 1940 and personnel director in 1942.

Ames Co. Consolidates

The Ames Company, Inc., Elkhart, Ind., and its Riedel-de-Haen Division, New York, have consolidated their operations under Ames Company, Inc., Elkhart.

The pharmaceutical products of the Riedel-de Haen Division will be placed under the sales policy of Ames Company, Inc. Paul de Haen, vice president of Ames Company, Inc., and general manager of the Riedel-de Haen Division, will remain with Ames Company, Inc., with offices at 51 Pine St., New York.

Scott and Nuckols Advanced

Swindell Brothers Inc., Baltimore, has announced the election of Joseph B. Scott as vice president of the company, and Walter S. Nuckols, manager of the New York sales office, as a director of the company.

Van Ameringen Elected Treasurer

A. L. van Ameringen, president of van Ameringen-Haebler Inc., New York, has been elected treasurer of the National Committee for Mental Hygiene.

Rigaud In U. S.

Mario Rigaud, president of the perfume companies which bear his name in

MAURICE RIGAUD

Paris and New York, has arrived in the U. S. aboard the Isle de France.

Reporting on the state of the perfume industry in France, Mr. Rigaud, who wears the French Military Medal and the Croix de Guerre for his part in the Battle of Dunkirk, said that complete recovery had been retarded by the inability to produce in quantity and still meet high manufacturing standards.

Scheer Forms Company

Walter E. Scheer has announced the formation of Scheer Chemical Co., Inc. The company will act as manufacturers' agents and technical sales and market development consultants for chemical manufacturers in the fields of plastics, surface active agents and fine chemicals. Offices of the company are located at 60 E. 42 St., New York 17, the telephone is Murray Hill 2-1941.

Mr. Scheer was with Commercial Solvents Corporation for a number of years, and more recently has been vice president of Amecco Chemicals, Inc.

Schering Award

Winners of the 1946 "Schering Award" for the best essays on the subject of "The Role of Hormones in Sterility" have been announced by Francis C. Brown, president of the Schering Corp.

Bent G. Boving, Lansdowne, Pa., a student at Jefferson Medical College of Philadelphia, was selected as winner of the $500 first prize.

Second prize of $300 was awarded to William O. Maddock, Portland, Ore. Mr. Maddock is a student at the University of Oregon Medical School.

Two papers were adjudged by the judges as equal in merit and as a consequence, two identical third prizes of $300 each have been awarded to two of the contestants.

Lionel M. Mapp of the McGill University Faculty of Medicine, and a resident of Montreal, Canada. The other tieing prize went to Stonewell B. Stickney of Mobile, Ala. Mr. Stickney is a student at Tulane University, School of Medicine.

Danco Sails for Europe

Gerard J. Danco sailed January 3 on the Queen Elizabeth to spend six weeks visiting Paris, Grasse and Belgium.

Lehn & Fink Appoint Hise

John A. Hise, Jr., has been appointed sales promotion manager of Lehn & Fink Products Corp., New York.

Mr. Hise joined the sales department

JOHN A. HISE, JR.

of Lehn & Fink in August, 1946. Before joining Lehn & Fink he had been with the sales department of Lever Bros., for seven years in the Minneapolis and Kansas City areas.

Rigg on Burroughs Wellcome Board

Burroughs Wellcome & Co., have appointed Earl W. Rigg as director of the company and vice president and manager of distribution. Mr. Rigg, formerly

EARL W. RIGG

a representative in the Buffalo territory, was made superintendent of the company's Tuckahoe plant in 1942, sales manager in 1944 and the manager of distribution in 1945.

Schwalb Joins Lefton Inc.

Walter J. Schwalb, formerly associate sales promotion manager of the E. R. Squibb & Sons, New York, has joined the staff of the Paul Lefton Company Inc., as package goods marketing specialist.

Mr. Schwalb was with Squibb for twenty years and had recently returned as a Commander after three and a half years in the Navy.

New Members of Nat. Beauty & Barber's Assn.

The National Beauty and Barbers' Association at its board meeting approved applications of three new active members and three new associate members.

Gulley and Boll, Inc., St. Louis, manufacturers of beauty parlor equipment, represented by Arthur A. Boll; Sure-Shot Laboratories, of Mobile, Ala. represented by Harry H. Meyers; and Zuni Company of Hollywood, represented by Louis Herzberg, are the active members.

Associate members elected were Bonder Glass and Closure Company of Brooklyn, represented by Samuel A. Bonder and A. Chester Bonder; the Marlee Sales Company, of New York City, represented by D. H. Marshall; and Musto Brothers, of North Bergen, N. J., represented by Louis Kleeman.

Peder Devold Oil Co. Merges With Chas. L. Huisking

Peder Devold Oil Co., Inc., and Santonine Company of America Inc., have been merged with Chas. L. Huisking & Co., Inc., and will continue to operate as divisions of the latter company.

Forgach Joins Smith, Kline & French

Mary Louise Forgach, B.S. in Pharmacy, Temple University, 1946, has joined the research staff of the Smith, Kline & French Labs.

Janney Named Vice President of Natl. Can

B. D. Beamish, president of the National Can Corporation, has announced the election of William R. Janney to the

B. D. BEAMISH

office of vice president.

Mr. Janney, who has spent half of his career in the can industry in plant management, has served as a sales executive with National Can for the past 17 years. As vice president he will continue his duties as general sales manager of the corporation's general line sales division.

Beyer Joins Dreyer

Daniel A. Beyer has joined P. R. Dreyer Inc. Mr. Beyer attended the University of Pennsylvania, and was recently released from the Armed Services.

Sheffield Joins New England Collapsible Tube

Alfred C. Sheffield has joined the sales staff of the New England Collapsible Tube Company. He will be located at the company's New York office, at 500 Fifth Ave. He is the son of W. K. Sheffield, vice president of the company.

Pfizer Acquires New Plant

Chas. Pfizer & Co., Inc., have made known their acquisition, from the War Assets Administration, of title to the Victory Yard property at Groton, Conn. The property was operated during the war by Electric Boat Co., for the production of submarines.

John L. Smith, the company's president in announcing the acquisition, made the following statement; "In acquiring title, the company intends to develop the site as a chemical plant in expansion of its current production activities at its Brooklyn plant, which it will continue to operate."

Aerial view of the Victory Yard property at Groton, Conn., acquired by Chas. Pfizer & Co., Inc., from the War Assets Administration. During the war the plant was used for the production of submarines.

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U.S.I. CHEMICAL NEWS

January ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1947

THE MONTH IN PLASTICS

A new plastic said to be stronger than all others and lighter than the lightest metal is developed . . . The adoption of a phenolic molded housing for a newly-designed guitar marks the entry of plastics into a field formerly served almost exclusively by wood and metal . . . A new apparatus is patented for simultaneously subjecting thermoplastic or thermosetting resins to pressure and high-frequency heating . . . A process is reported to be perfected by which mirrorized plastics and metal coatings can be produced on plastics by metal deposits in high vacuum evaporation chambers . . . Fine detail in the production of photographs and drawings by use of photosensitive polyvinyl acetate lacquer is achieved . . . Acid etching on plastics is perfected . . . The new "Scotch" vinyl plastic electric tape is claimed to possess increased stretch, thinness, resistance, and flexibility . . . An "expanded" polystyrene, alleged to show resistance to mold and rot, is perfected for low-temperature insulation . . . A new plastic fabric for period furniture is announced . . . A patent leather plastic, suitable for uppers and soles of shoes, is placed on the market . . . A new plastic-base glue, which sets hot or cold, is suggested for use on all kinds of wood.

"Smokeless Coal" Now Receiving Final Tests

The bane of industrial cities, "smog," may soon be a thing of the past if a new process for making new types of smokeless fuel from western soft coal is successful. The process, developed experimentally over a period of seven years, is now undergoing its final tests.

In the process, finely divided coal is passed continuously through a heated horizontal retort which is vibrated at a controlled intensity, according to the inventor. At high temperatures the coal is then pressed into "logs" about 2 inches in diameter. The complete process of converting the coal into smokeless logs is reported to take only three minutes.

Research Data on Powder Metallurgy Now Available

Six research reports on the strides made in powder metallurgy research during the war are now available to the chemical and related industries. Among the highlights in these reports is the discovery that nonflowing, finely divided metal powders can be made to flow by waterproofing the individual particles with a vapor of the wartime-developed methyl chlorosilanes. This discovery now makes possible the use of many metallic powders hitherto considered unsuitable for powder metallurgy, according to the authors.

Clear Liquid Soap

The cloudiness which results when liquid soaps are stored in glass containers may be avoided, according to the claims made in a patent issued recently. To preserve the clarity of the soap, the inventor suggests the addition of small quantities of commercial sodium silicate and a prescribed treatment.

Modern Farming Makes Diverse Use of Many Types of Chemicals

Wide Range of Compounds Are Vital In The Manufacture of Feedstuffs, Insecticides, Insectifuges, and Other Products

Chemicals of every type, many of which have their origin in farm products, are helping America's post-war farmer meet today's urgent demands for increasing quantities of high quality products. These chemicals are used in the manufacture of animal feeds and in the preparation of compounds that protect livestock, grains, tobacco, and dried fruits from insects and vermin. They are also employed to kill weeds, to aid in the preservation of food, to hasten the ripening of fruits and vegetables, and for numerous other purposes.

Modern Animal Feeds

Today, farm animals are fed with carefully processed feeds which include all of the essential nutrients known to be necessary for good health and general well being. In this planned program of animal husbandry, five valuable U.S.I. products are in wide use: Curbay B-G, Special Liquid Curbay, Vacatone 40, U.S.I. Brand Riboflavin Mixture No. 1, and U.S.I. Brand Riboflavin Concentrate No. 85. These products, representing more than ten years of service to the feed industry, contain essential parts of the vitamin B-G complex. Feed manufacturers are substituting increasing amounts of vegetable protein to replace scarce animal protein, and nutritionists recommend the use of vitamin B-G products to bring the vegetable proteins to a high level of performance.

Curbay B-G (dried fermentation solubles), a by-product of alcohol fermentation, contains vitamins of the B-G complex essential for maximum feed efficiency. Special Liquid Curbay (condensed molasses distiller's solubles), a special concentrate derived from a yeast fermentation of black-strap molasses, does an outstanding job as a feedstuff ingredient for hog and dairy rations. The addition of Vacatone 40 (dried molasses distillers' solubles), which is richer than dried skim milk in the essential B complex vitamins, is one of the

(*Continued on next page*)

Bactericidal Powers of Alcohols Are Determined

Swedish workers have classified the bactericidal powers of alcohol *in vitro*, in the following order of increasing effectiveness: ethyl alcohol, propylene glycol, amyl alcohol, propyl alcohol, and butyl alcohol. In the form of aerosols as vehicles for phenol, the effectiveness increased in the order: propyl alcohol, butyl alcohol, amyl alcohol, and propylene glycol. Since the latter is in the order of increasing boiling points, the authors conclude that the bactericidal effectiveness is dependent upon the stability of the aerosol.

Invents Flameproof Coating for Fabrics

A new-type flameproof coating for fabrics is claimed in a patent issued recently. The coating is described as consisting of coumarone indene resins and an antimony oxide or sulfide in proportion of about 8 to 5 by weight. It is said to improve resistance to water, weather, mold, fungus, and mildew as well as making the fabric flameproof. According to the patent, the coating is applied at temperatures of 225 deg. to 260 deg. F.

New Cinnamon Substitute

A substitute for cinnamon may be obtained from waste oat hulls, it was announced recently. The compound designated as furanacrolein, is said to be derived in two simple steps from the waste hulls.

Today's farms produce more and better foods, thanks to a wide variety of chemicals which go into the manufacture of products ranging from feedstuff ingredients to insecticides.

ADVERTISEMENT—*This entire page is a paid advertisement*

January ★ **U.S.I. CHEMICAL NEWS** ★ 1947

Organic Chemicals on the Farm

(Continued from page one)

more economical ways of forming a proper ration for poultry, hogs, and other livestock.

Made available recently are two riboflavin concentrates. One of these, U.S.I. Brand Riboflavin Mixture No. 1, a natural riboflavin concentrate obtained from vegetative fermentation reaction, contains one gram of active riboflavin per ounce of material, along with carriers and important vitamins of the B complex. The other, U.S.I. Brand Riboflavin Concentrate No. 85, also obtained from a vegetative fermentation, consists of 85 parts per hundred of active riboflavin, along with a natural carrier and a new vitamin of the B complex. It is expected that methionine will be used in the near future to enrich feedstuffs.

Insecticides and Insectifuges

The protection of farm animals and workers against insects is now obtained by many low-cost sprays containing organic chemicals. One of the newest of these sprays is produced by combining pyrethrum with a new D&O-developed chemical, piperonyl butoxide. Liquid insecticide and aerosols made in this way are superior to straight pyrethrum insecticides in range of effectiveness, stability, and residual killing power. They are completely free from toxicological hazards, irritation, odor, and other undesirable properties. Other insecticides and insectifuges are constantly being developed by the Entomological Division of Dodge and Olcott, Inc., located in U.S.I.'s newly-opened laboratory in Baltimore.

Other Uses

Ethylene is used to hasten the ripening of fruits and vegetables. Plant hormones, employed to stimulate growth, and to kill weeds, are synthesized from organic chemicals. Ethyl alcohol, amyl alcohol, ethyl acetate, and amyl acetate are among the chemicals used to prepare flavorings, extracts, and essences.

Courtesy U. of Mo.

Chicks fed with feedstuffs enriched with riboflavin concentrates avoid curled-toe paralysis (shown here) . . . grow into top egg producers.

PAINT SHOW BREAKS ATTENDANCE RECORDS

The first post-war coatings convention broke all attendance records at Atlantic City. Here, at the U.S.I. booth, seated left to right: E. G. Delaney of U.S.I. and H. W. Cantwell of the Crown Cork and Seal Co. Standing left to right Grant Schleicher of Wilson Printing Ink, Dr. C. W. Meincke of Lasting Products Co., and M. M. Gruber of U.S.I.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A new fast paint brush cleaner is said to clean hardened paint, lacquer, varnish, shellac or enamel while being non-injurious to hog bristle, nylon, setting compound or painter's hands. USI **(No. 149)**

To waterproof exterior walls and to reduce dampness and seepage in damp basements, a new compound is offered which, the manufacturer states, can be applied like a paint. **(No. 150)** USI

A new cold-setting waterproof adhesive, described as a thermoplastic synthetic elastic composition that does not require vulcanization, is said to be unaffected between the temperature range —40 deg. F. to +160 deg. F., and to be more resistant to oxidation than similar natural rubber compounds. **(No. 151)** USI

A liquid windshield defroster, said to soften grease, ice or frozen rain, is claimed to be harmless to auto finishes and to contain no corrosive chemicals. **(No. 152)** USI

New-type paints, described as intermediates between ordinary paints and ceramic coatings, are now offered for uses where high heat- and wear-resistance are required. They are said to give hard, tough films that will neither fade nor chalk. USI **(No. 153)**

To revitalize dried-out hardened leathers, is the purpose of a new compound designed to give the maximum of waterproofing without clogging the leather "pores." **(No. 154)** USI

A quick-acting paint remover will stay moist and deep-cutting as long as 24 hours, reducing hard finish coats to a quickly-yielding sludge, according to the manufacturer. It is claimed to leave wood grain and bristles unaffected. **(No. 155)** USI

To prevent rot of wood, rope, canvas, and cloth products, a new product has been announced which is described as a liquid which penetrates the fibers, waterproofing and mildew-proofing the articles. **(No. 156)** USI

A synthetic asbestos, which may also be used as a mica substitute, is said to have properties similar to polystyrene. It is recommended for use in electrical equipment. **(No. 157)** USI

Bristles from casein are now being made commercially for the first time, it was announced recently. Of many possible uses, the bristle is said to be particularly adapted to the construction of paint brushes since it is resistant to oils and organic solvents. **(No. 158)**

U.S.I. INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. U.S.I. BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96% Absolute
*Super Pyro Anti-freeze
*Solox proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

*Registered Trade Mark

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Alpha-acetylbutyrolactone
5-Chloro-2-pentanone
5-Diethylamino-2-pentanone
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Alpha-Oxalpropionate
Ethyl Sodium Oxalacetate
Methyl Cyclopropyl Ketone

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
Riboflavin Concentrates
*Vacatone 40
*Curbay B-G *Curbay Special Liquid

ACETONE
Chemically Pure

RESINS
Ester Gums—all types
Congo Gums—raw, fused & esterified
*Aroplaz—alkyds and allied materials
*Arofene—pure phenolics
*Arochem—modified types
Natural Resins—all standard grades

OTHER PRODUCTS
Collodions Ethylene
Ethylene Glycol Urethan
Nitrocellulose Solutions dl-Methionine

Printed in U.S.A.

Squibb Appointments

Creation of its thirteenth and newest sales division, under the leadership of E. L. Bauer, manager, by E. R. Squibb & Sons with headquarters in St. Louis,

EDGAR L. BAUER

has been announced by Carlton H. Palmer, chairman of the board.

The new division known as the Mid-Western division, will serve eight states.

Edgar L. Bauer joined the Squibb sales staff in 1927, following his graduation from the University of Kansas City, College of Pharmacy. In 1936, he was promoted to the St. Louis territory and in 1941 was appointed district manager. During the war he served in the Army Administrative Corps and was discharged with the rank of Major.

Clarence H. Winkelmann is a graduate of the St. Louis College of Pharmacy. He was appointed to the Squibb sales staff in 1936 and has worked en-

C. H. WINKELMANN

tirely in Missouri, his last assignment being in University City and East St. Louis.

Saunders Joins Bristol Myers

Donald L. Saunders has become associated with Bristol-Myers Company, New York, as assistant secretary.

A native of Brooklyn, Mr. Saunders is a graduate of Cornell University and Yale Law School, where he served as editor of the Yale Law Journal.

Martins Rejoins Lentheric

Harold C. Martins has been appointed display director for Lentheric, Inc., it has been made known by W. D. Canaday, vice-president.

He will be in charge of planning all Lentheric display activities both in the department store and drug store fields. Mr. Martins served with Lentheric several years ago as a director of special promotions in leading department stores throughout the country, and was more recently director of displays for Halle Bros., in Cleveland.

Storfer Named Vice President

Rudolph Storfer, vice president of Parfumerie Internationale Corday, Paris, has been appointed executive vice president of Parfums Corday Inc., New York, it was announced recently by Benson Storfer, president. He will coordinate all merchandising for the French and American companies.

Graesser Named Sales Manager

Appointment of Carl F. Graesser as sales manager of thermosetting molding materials for Monsanto Chemical Company's plastics division has been made known.

Mr. Graesser will be in charge of sales of Resinox and Resimene molding compounds. He will be succeeded as assistant sales manager of thermosetting molding materials by C. L. Richards, Jr., formerly branch manager of the division's St. Louis office.

The latter office has been assigned to T. J. Martin, formerly a salesman in the Connecticut territory. Appointment of W. H. Face as assistant to the sales manager of thermoplastic molding materials also was announced.

Schwartz Named President

Frederic N. Schwartz was elected president of Bristol Laboratories at a recent meeting of the board of directors.

Mr. Schwartz was graduated from Syracuse University in 1931. For a number of years he was associated with Bard-Parker Company, surgical instrument manufacturers. He joined Bristol-Laboratories, in 1945 after his release from the Army. In February 1946 he was made executive vice president.

MM&R Appoints Grattan to Sales Staff

Magnus, Mabee & Reynard, Inc., announce the appointment of John P. Grattan to its New York sales staff.

JOHN P. GRATTAN

Mr. Grattan has had long and valuable experience in the financial field. As an analytical reporter for Dun & Bradstreet, Inc., he came in contact with many large commercial and industrial firms.

Wartime service interrupted the business career of Mr. Grattan from 1942 to 1945.

Lynch, President of Nat. Folding Box Co.

Walton D. Lynch has been elected president of the National Folding Box Company, Inc. At the same time it was announced that the stockholders of the National Folding Box Company, a New Jersey corporation, has approved its

WALTON D. LYNCH

acquisition by the National Folding Box Company, a new Connecticut corporation.

Mr. Lynch started with the company in 1919 on his release from military service at the close of World War I. Since 1938 when elected vice president in charge of sales and advertising, he has served as president of the Folding Box Association.

New Perfection DROPPING PARTS

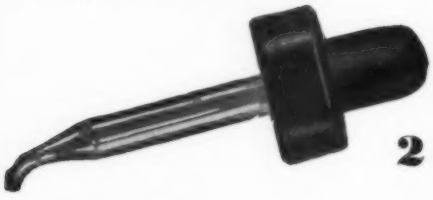
AROUND THE CLOCK

New Perfection Dropping Parts are ready for duty and are on duty at home and abroad at all times of the day and night. Packagers have faith in them because they know that they are fitting companions for their preparations and, when put to use, they will respond with their customary service. Beyond question, a good preparation and a good non-dripping dropping part have an intimate relationship. Without a good dropping part the sales success of even the best preparation is doubtful. New Perfection dropping parts are day and night dropping parts. When they are with your product they can be used around the clock with the assurance that they will function properly.

For oily preparations Amekine synthetic rubber parts are recommended as Amekine does not swell like natural rubber when used with oil over long periods. Dropper glasses are obtainable plain or calibrated in colors. New Modernistic bottles can be furnished with dropping parts in Amber, Blue, Green, or Clear in 2cc, ¼, ½, 1, and 2 oz. sizes. Write for samples and quotations.

1

Non-rolling, extra depth, Bakelite Cap with thick flange rubber part; Saftee ball glass.



2

Double shell metal cap; special thin flange rubber part; special bent glass.

3

Regular or acid resisting plastic cap; regular rubber part in various colors; semi-blunt glass.

4

Single shell metal cap; thin flange, non-swelling Amekine synthetic rubber part, without strong odor; blunt glass.

5

Fancy colored beetle cap; midget rubber part; regular straight glass.

PENNSYLVANIA GLASS PRODUCTS CO. INC.

of Pittsburgh

"GLASS GOODS OF THE BETTER KIND"

428-432 NORTH CRAIG STREET . . . PITTSBURGH, PA., U.S.A.

Enjay Organized

Organization of Enjay Company, Inc., to take over the sale and distribution of all products handled by the chemical products department, Stanco Distributors, Inc., and Standard Alcohol Company has been announced by H. W. Fisher, president of the new company, which is a subsidiary of Standard Oil Company.

Officials of the new company, in addition to Mr. Fisher, are John A. Britton, Jr., and James G. Park, vice presidents; W. F. Quick, secretary; H. P. Schoeck, treasurer; G. M. Buckingham, assistant secretary; and L. R. Moore, assistant treasurer.

Royal Advances Crosby and Jones

In a special year-end meeting of the board of directors of Royal Pharmacal Corporation, Joseph W. Crosby and William H. Jones were elected to the board of directors. Mary B. Norton was elected secretary of the corporation.

Jeffs Named Director of Sales

Bernard Jeffs had been elected assistant vice president and director of sales and advertising of the physiological laboratories of Reed & Carnrick, pharmaceutical manufacturer, Jersey City. John M. Sartorius, has been named assistant secretary at the laboratories.

Commercial Solvents Buys New Plant

Major Theodore P. Walker, president, has announced the purchase by Commercial Solvents of the Pennsylvania Alcohol and Chemical Company. The new unit will operate as an independent division, augmenting the manufacturing facilities of Commercial Solvents. The plant is located at Carlstadt, N. J.

Ferris Heads Salesmen Assn.

James E. Ferris has been elected president of the Sales-Association of the American Chemical Industry, to succeed James McInnes, of Commercial Solvents Corporation, New York. Other officers are: vice president, J. Robert Fisher of the Fischer Chemical Company; treasurer, William C. Harmon, Jr., of the Calco Chemical Division of the American Cyanamid Company; secretary, John Seidler, of Whittaker, Clark & Daniels, Inc.; executive committee, Charles P. Walker, Jr., of the Citro Chemical Company and Leon W. Miller, of the Barrett Division of the Allied Chemical & Dye Corporation.

Pissarro Joins Van Ameringen

Andre Pissarro has joined the firm of van Ameringen Haebler Inc., in the capacity of a foreign executive.

A native of Paris, Mr. Pissarro is related to the famous French impressionist

ANDRE PISSARRO

painter, Camille Pissarro. Prior to the war his activities took him to all parts of the world and he expects shortly to start on an extensive trip through Latin America.

Ortho Announces Shorter Work Week

The board of directors of Ortho Pharmaceutical Corporation announced that the company would adopt a universal 35-hour workweek for its employees as soon as the last departments are transferred to the new plant and research laboratory in Bridgewater, N. J.

Philip B. Hofmann, president of Ortho, said it had long been the philosophy of the company to continuously strive to achieve for its employees the shortest practicable workweek. Employees subject to the Fair Labor Standards Act who may be required to work from time to time in excess of 35 hours per week will receive straight time compensation for hours over 35 and up to 40 and time and one-half overtime for hours in excess of 40 hours.

Hope, President of Stanco

Stanco Inc., Linden, N. J., has elected as president Stanley C. Hope, president of the Gilbert & Barker Mfg. Company, Springfield, Mass. Both companies are affiliates of Standard Oil Company (New Jersey).

Mr. Hope succeeds F. W. Moss, who is retiring but will continue for another year in an advisory capacity on Stanco's foreign marketing activities.

Simon Organizes New Company

George Simon, formerly of Heyden Company, is now associated with a newly organized export and import firm, Callan, Simon & Norton, 21 West St., New York. Since his retirement from Hayden several years ago, Mr. Simon was associated with Crawford. Callan & Co. This firm was dissolved December 31, and in addition to the above firm, Crawford & Co., 350 Madison Ave., New York, has been formed.

Stoughton Made Member of Law Firm

The law firm of Rogers, Hoge & Hills has announced that Lenore B. Stoughton has become a member of the firm. Mrs. Stoughton is principally engaged in the law of trade-marks and unfair competition. She is the wife of Philip Stoughton, consulting chemist.

A. T. Rickards Retires

R. O. Lohrberg, general sales manager, Sharp & Dohme, Inc., has announced the retirement of A. T. Rickards, assistant sales director in charge of sales research.

Starting his career in 1898 as an assistant bill clerk with the H. K. Mulford Company, Mr. Rickards was elected assistant treasurer in 1904 and in 1921 was made comptroller.

At the time of the consolidation of the Mulford Company and Sharp & Dohme, in 1929, Mr. Rickards remained as assistant treasurer and in 1939 was made assistant sales director in charge of sales research. In 1944 he asked to be relieved of the assistant treasurership to devote his full time to sales research.

H. E. Ditzel, products marketing manager, will succeed Mr. Rickards.

Brooks Heads N. Y. Board of Trade

H. L. Brooks was elected president of the New York Board of Trade to succeed Ralph E. Dorland, an executive of the Dow Chemical Company, who becomes chairman of the board.

Smith Named Chairman

Paul Smith, assistant export manager of Bristol-Myers Co., has been elected chairman of the Drug & Chemical Export Club of the Foreign Credit Interchange Bureau. He succeeds L. K. Webster, of Smith, Kline & French Laboratories. Hermany Knaack, of Zonite Products Corp., was named vice president of the club.

Hooker Retirement Program

The Hooker Electrochemical Company has inaugurated an employee's contributory retirement program, effective as of October 1, 1946. The program provides for retirement income for life based on both past and future service. The cost of benefits based on future service is defrayed by contributions of both the employees and the company, the company paying about four-fifths the total cost. In addition the company will bear the entire cost of past service benefits to which long service employees would have contributed had the program been in effect since the company was founded 40 years ago.

The program is designed to provide benefits which together with Social Security benefits will approximate 50 per cent of the average earnings for employees who will retire at their normal retirement date after 25 or 30 years of service.

The company's group insurance and sickness and disability benefit plans will be continued along with the pension program.

Hertz Named President of Med. Dir. Assn.

At the annual meeting of the Association of Medical Directors, held at the Sheraton Hotel, N. Y., the following officers were elected: president, Dr. Carl J. Sebastian Hertz, of Duke Laboratories Inc.; vice president, Dr. Rudolph E. Gruber, of Merck & Co., Inc.; Secretary-treasurer, John A. Pringle, director Geneological div., Julius Schmid Inc.

Amfre Drug Buys Tosse Patents

Amfre Drug Company, Inc., has purchased the rights to manufacture and distribute the products of E. Tosse & Co., Inc.

Tosse products will be sold through a special division of Amfre Drug Company which acquires all Tosse patent rights and trade-marks. Headquarters for E. Tosse & Co., will be the same as Amfre, 95 Madison Ave., New York 16.

Bjorksten Forms Corporation

Dr. John Bjorksten, owner of Bjorksten Laboratories has announced the formation of a corporation under the name of Bjorksten Research Laboratories.

Officers of the corporation are: Dr. Johan Bjorksten, president and treasurer, Stuart O. Fiedler, vice president, A. Charles Lawrence, secretary.

Walter L. Bomer

Walter L. Bomer, a director and vice-president in charge of exports of the Bristol-Myers Company, died New

WALTER L. BOMER

Years Day, at his home, 35 Prospect Park West, Brooklyn, of a heart ailment. He was 57 years old.

Born in Chicago, Mr. Bomer attended grade and high school there, moving to Brooklyn and becoming associated with Bristol-Myers in 1905. He rose from office boy to filing clerk and payroll clerk, and from there into the financial department.

In 1918 he was placed in charge of the firm's newly-organized export division. Eleven years later he was appointed vice president in charge of exports. He was elected a director in 1942.

He leaves a widow, and two brothers.

Albert Delavigne

Albert Delavigne, sixty, president of Roure-Dupont, Inc., died December 30,

ALBERT DELAVIGNE

at his home, 1220 Park Ave., New York. A native of Paris, he was a Captain in the French Air Force in World War I and in 1939 served as a civilian with the office of the French air attache in Washington.

He first came to this country twenty-six years ago and became president of Roure-Dupont, Inc., six years later. Surviving are his wife, a son, Jean Delavigne and three daughters.

John S. Norton

John S. Norton, executive vice president of the Lambert Pharmacal Company, died December 31 in Los Angeles while on a business trip.

Mr. Norton was 54 years old, and lived in Webster Groves, Mo., and Madison, Conn. He was a graduate of Yale, class of 1916. He had his early business training at the Philip Ritter Agency, and later became vice president in charge of sales of Agfa-Ansco Film Company. He joined the Lambert Pharmacal Company in 1932.

Dr. Samuel Massengill

Dr. Samuel Evans Massengill, seventy-five, head of the S. E. Massengill Company which he established in 1897, died December 15 at his home in Bristol, Tenn.

In 1938, Dr. Massengill was fined $16,800 in a U. S. District Court because his pharmaceutical company had put out the previous year an "elixir of sulfanilamide" which contributed to the death of more than seventy persons. The product of his company contained sulfa and diethylene glycol. It was in the early days of the sulfa drug and it was alleged that the mixture was put on the market before it had been tested adequately.

S. H. Ebert

S. H. Ebert, president of the Interstate Color Co., Inc., died recently after a lingering illness. He had been actively engaged in the operation of the business of the corporation for about twenty-five years.

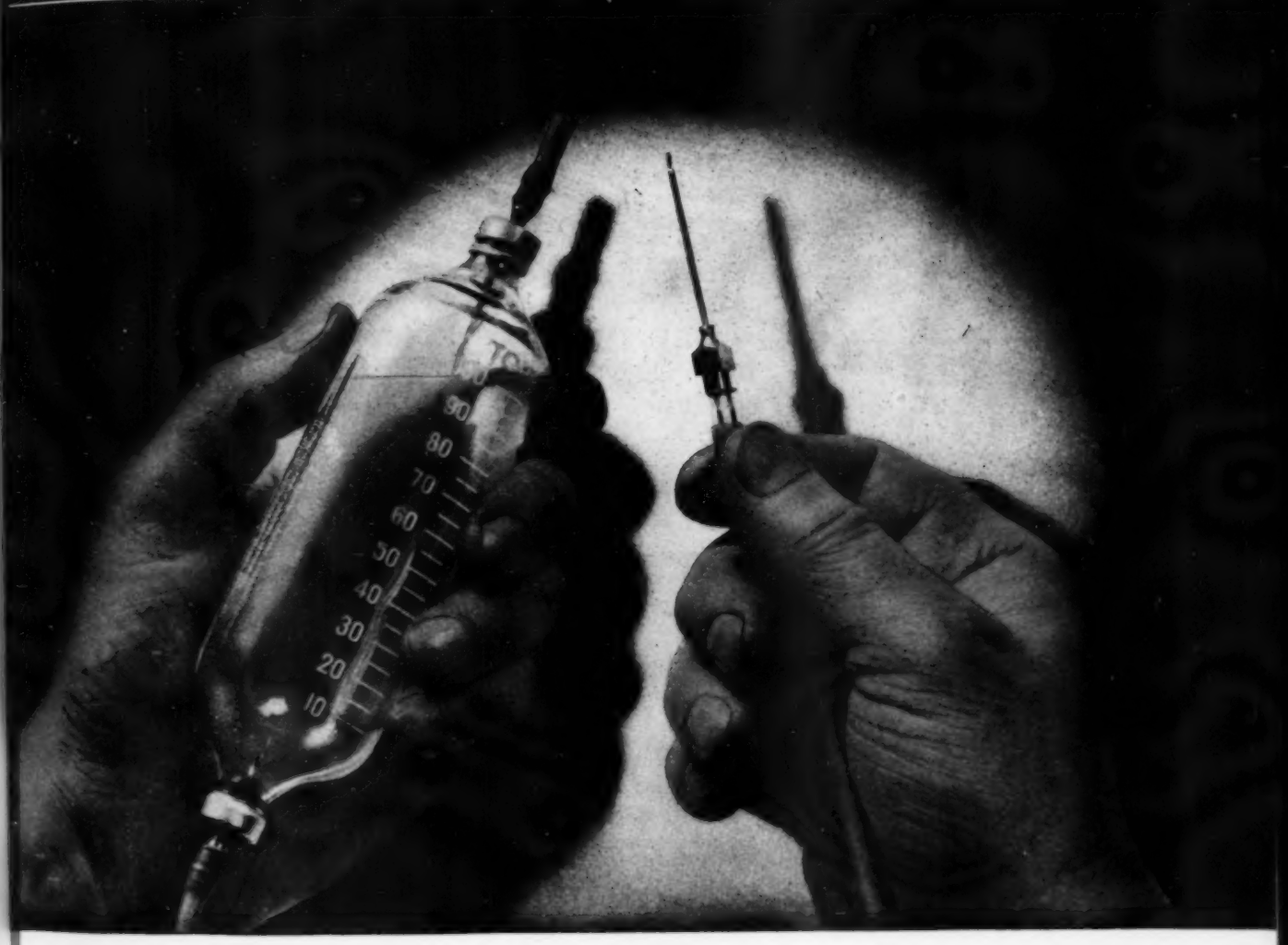
The future activities of the Corporation will be conducted under the supervision of Mr. Ebert's family.

Maurice S. Picard

Maurice S. Picard, 43, returning to this country from a business trip to Europe, was killed as a result of the crash of a Trans World Airline plane near Shannon, Eire, on December 28.

Born in France, Mr. Picard had become an American citizen and had been the American representative of J. Henri Moutet, Grasse, France. He is survived by a wife and two sons.

All three* are vital to the making of Parenteral Solutions



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Rigid laboratory control in your plant

Modern medical practice makes full use of the advantages inherent in parenteral solutions. These "protected medicines" combine the features of accurate dosage, sterility, and stability of assay.

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Baker's

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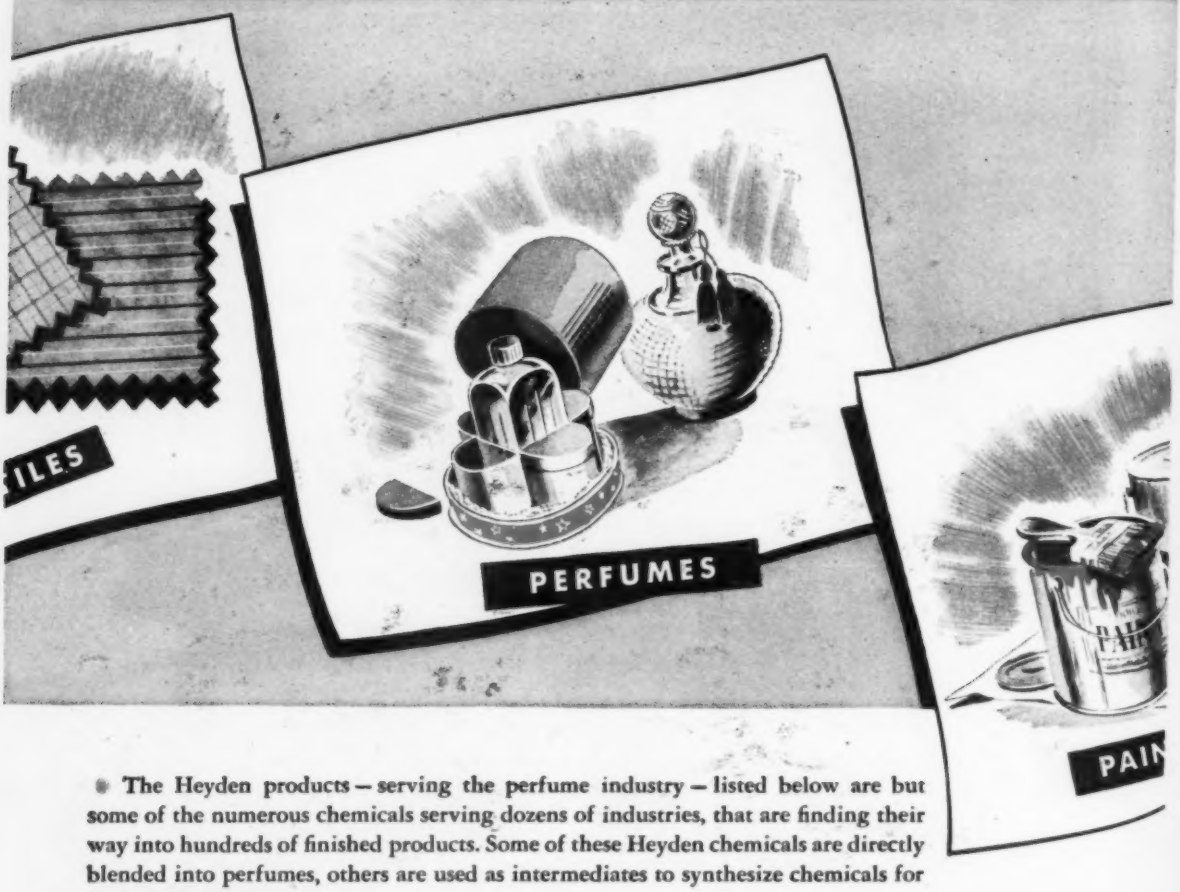

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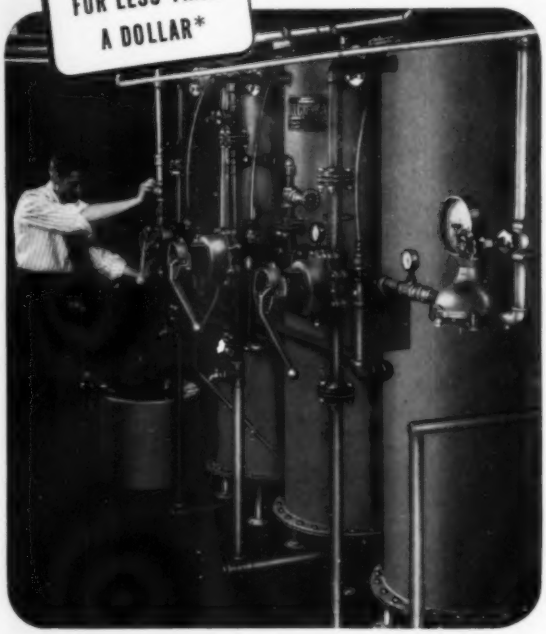

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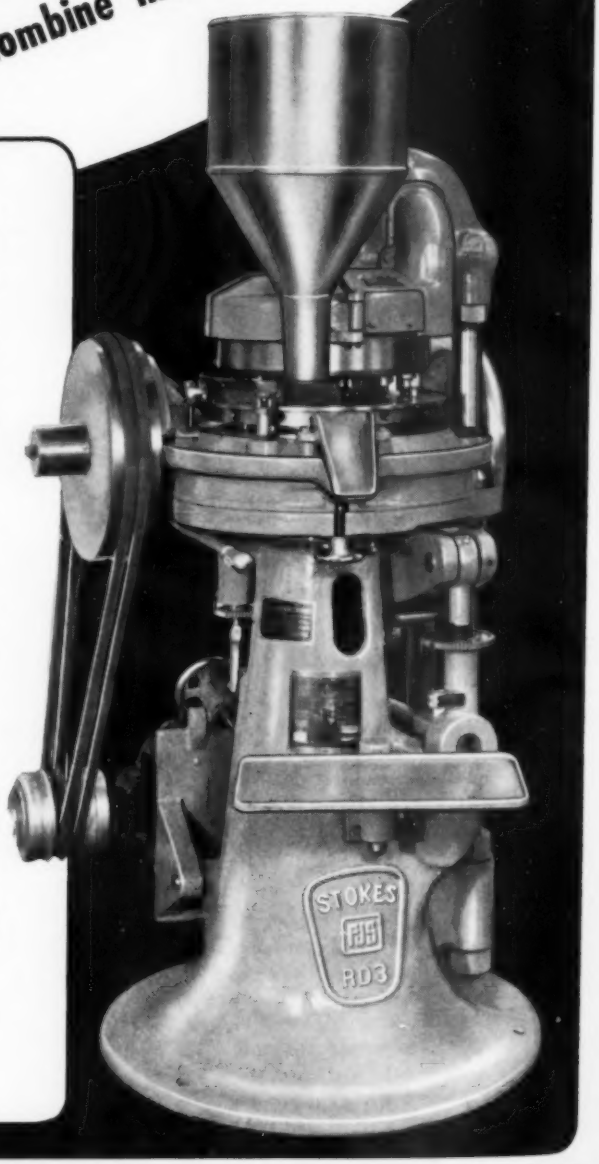

F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est. 1895

Production Forum

By Francis Chilson

Industrial Consultant

Planning Expansion

I am beginning to weaken a little bit in my insistence on four-way expansion for factory buildings. While such a condition may be ideal, it is not always practical for many reasons. In the first place, the architect likes to doll up the facade of the building facing the street, especially when the building also contains offices and laboratories, and thereafter the management is loath to make an expansion which in any way would cause a change or impairment in the principal facade of the building.

Whatever may be the ideal way to expand, it is always done in one way anyhow—by impinging into warehouse space. You seldom have need for a lot of expansion space all at once. Generally speaking, you need a few hundred or a few thousand feet at a time, and you are never able to convince Mr. Big that an addition should be put on the building until you have robbed your warehouse area to a point where conditions become intolerable. Sometimes Mr. Big will even insist that outside warehousing space be rented for surplus inventories and for long storage items, before he will consent to an expansion of the warehouse area.

So of late years, I have been planning new buildings so that the expansion of principal operating areas will gradually absorb warehouse space. You can, incidentally, do this much easier in an entirely new building than you can in an existing building. Every possible kind of situation is met in old structures and you have to make the best of what you've got.

Higher Standard of Living

Every now and again when I sound off on what we could do for our working people, everyone accuses me of being an impractical visionary. I have no recourse against such an accusation, but I should like to quote the words of a recent speaker:—

"I am frequently amazed with the ease with which we applaud the idea of a higher standard of living for all people, without apparently realizing that our own employees are part of that people."

The same speaker went on to say, "As to present standards of living compared with those of 1915 it would be reasonable to say that in the interim the standard of living had increased a hundred-fold." He went on,—"management must aim toward a work week of less than forty hours, better educational facilities, sickness, accident and other benefits, including a generous retirement plan." He emphasized the fact that the cost of all of these things were to be borne by the employer. He continued:

"Since the faults of business were the fertile ground upon which grew many of the vices of organized labor, so will the reformation of business have to preceed the reformation of labor. And in the doing of this, business will have learned the right to appeal to public opinion."

The foregoing sounds a little like what Frank Chilson has been trying to tell you from time to time over the past several years. But the quotations were taken from an address by a very hardheaded and successful business man. He's the sort of guy who believes in dynamic capitalism. He's the sort of a guy whose life demonstrates that this is the best country that ever was, and whatever its faults may be, we can correct them. His name is Charles Luckman, president of Lever Brothers Company, formerly president of Pepsodent. I think you'll agree, from his record, that he is not a visionary. But if actually he is a visionary, he's the kind of visionary I want to be.

Selecting Personnel

One of the most difficult problems confronting management is the selection of executive personnel. A very prominent business man told me recently that for the past twenty years, not over half of his selections for key posts in his organization had turned out well, and that he regarded himself as being extremely fortunate be-

cause most of his associates didn't have such good luck. As one grows older and more widely experienced, the difficulty of selecting people for key posts is more acutely understood. John D. Rockefeller, Sr., a long time ago said there were more ten, twenty, and thirty thousand dollar jobs than there were men to fill them. When I was younger, I used to regard this dictum as being only a good old fashioned copy book maxim. I don't any more. Right now in the trade there are some big time jobs floating around waiting for men qualified to take them.

You can never tell really what a man is capable of unless you try him out. I know there are personnel consultants who profess to be able to examine the bumps on a man's head and give you the lowdown on all his capabilities. As a matter of fact, a lot of outfits in the trade have gone hog wild on this pseudo-scientific mumbo-jumbo, which has a certain usefulness up to a point, but I must say that the very worst organization I ever had to straighten out was presided over by a man who was nuts on the subject of scientific personnel selection. He wouldn't even hire a janitor without having his head examinded. His selections for the key posts in his organization were almost without exception wrong. He didn't even rate 20% success.

A man may have the previous experience, he may have the training, he may have a record of successful performance, he may have a nice agreeable personality, he may be very bright, and yet be a complete flop in the organization. The thing most people forget in selecting key men is that no man is omniscient; no man can succeed in any job of his own individual abilities. In the background lurking somewhere there may be a good man Friday, or a good woman Thursday who can furnish just enough of what he needs to make his operations successful. When you hire him for a similar post and fail to get his work horses also, he very often blows up. Moreover, there are a lot of men in the trade who are successful simply because they reap the fruits of other peoples' brains.

It is easy to be fooled by "executive presence." A man may have the air and manner of the successful executive; he may dress the part; he may know all the shibboleths of business without having the faintest conception of what they really mean. The hell of it is that you won't discover all this until you have hired the guy and attempt for a year or so to work him into the organization.

What I have said about executives applies as well to scientists too. I know one very prominent chemist who has been given credit for a lot of original work and who is (and I can say this with assurance because I have known him for years) one of the most dishonest men intellectually I have ever known. I have sat in conferences with him and seen him pick the brains of his associates and steal their ideas with such aplomb and easy assurance (which is another way of saying polished effrontery) that unless you really knew the guy you would be amazed at his intellectual fertility.

However, it would simplify management's job if there were some way by which you could judge a man and know what his capacity will be under conditions prevailing in your own organization. Hiring and firing is an expensive procedure and it is very unsettling to every organization. I have known men continued in office long after it was generally admitted that they were incompetent simply because top management did not want to unload them for fear of disturbing the morale of their organization. Picking key men is a tough job.

My New Photograph

I have heard some sarcastic comments about my new photograph from the ten cent seats in the bleachers. They say the photograph was made ten years ago. I have tried several shots of myself in this department over the past year or so and have employed the best photographers in the country to make them, but the hell of it is the photographs all look like me. I am reminded of the time that Joe E. Brown was shown a photograph of his face blown up six feet in diameter. After Joe studied it for awhile he shook his head and said very positively "It ain't so." If you birds out in the bleachers don't like my puss you'll have to grin and bear it. I've been stuck with it longer than you have.

Woodrow Wilson used to have a limerick about his phiz. It was good if I could only recall it because it would fit my own physiognomy as well. Now that I have lost my front teeth because I forgot to duck, I think I will have a new picture made. That should be pretty.

Measuring Small Dosages

Every now and then someone is confronted with the problem of packaging dry powders in very small amounts or dosages. When this is done in the usual way by weighing minute amounts of powder on a balance and carefully packaging by hand, the process is slow and enormously costly. Hence, inquiries frequently come in concerning equipment that will do such work automatically at high speed.

First of all, let me say that any high speed packaging operation cannot be a true weighing operation, at least not when you are dealing in quantities of a few grams or less. Now the great trouble with packaging small quantities of dry powder consists in the fact that the powders are never of uniform density. Hence any attempt at volumetric measurement results in weight inaccuracies unless you find it possible to adapt the technique of the munitions makers. A 22 cartridge is, as you know, a very small "package," but the quantity or powder it contains must be accurate in order to secure any degree of accuracy when the cartridge is fired from a rifle. Realizing that variation in particle size would cause a resulting variation in the charge of powder, unless particle size were rigidly controlled, the munitions makers long ago developed a method of standardizing the density of the gunpowder. This is done by a very careful granulating and sifting process.

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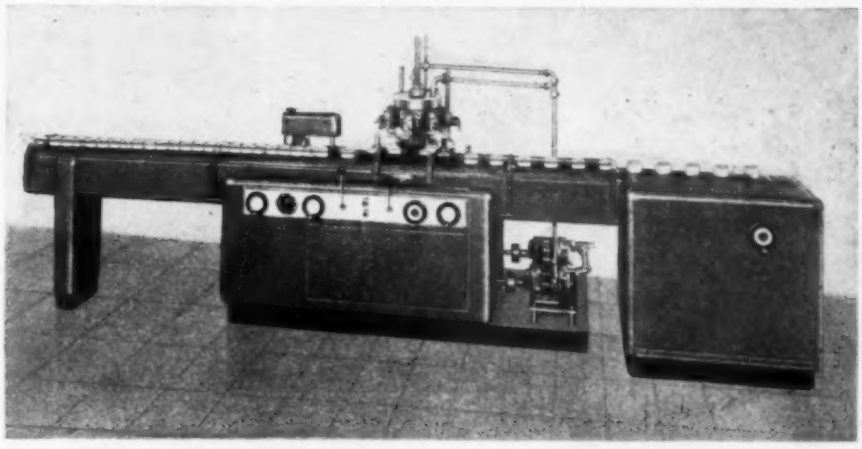

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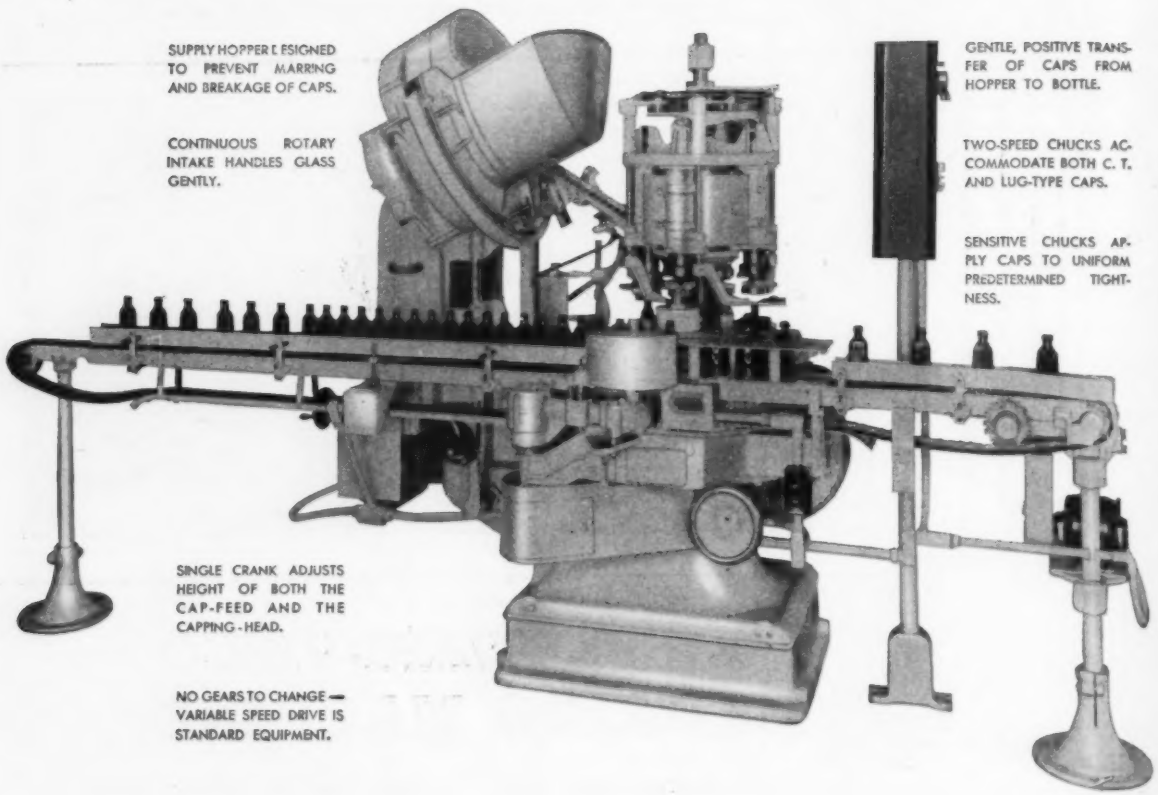
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first by micro-atomizing it to reduce all the particles to the finest possible mesh. Then dry-slug it. Then granulate it. Then sift through classifying screens of seven or eight decks and these will give you a classified powder which, when measured out volumetrically will give you a weight that is as nearly uniform as it is humanly possible to achieve, even with a balance.

The question then remains how to fill a multiplicity of ampoules, vials, or whatever the small packages may be. No standard machine is available for operations of this sort. You can make a homemade apparatus in several ways: Make a hopper with a perforated sliding bottom similar to a tablet counter. The perforated slide must fit very tightly against the bottom plate and the scraper for striking off the top must fit tightly against the top plate so that you get an even struck fill. A more complicated apparatus consists of a shaft with holes of suitable size drilled almost through it from opposite sides. This shaft is machined and polished and inserted within a slotted tube, the interior of which likewise has been polished and lapp fitted and which is affixed to the bottom of a supply hopper equipped with a vibrator. When the holes of the shaft are in an upright position the material flows from the hopper into the holes in the shaft. The rotation of the shaft cuts off the supply and as the shaft turns through an arc of 180° the material in the upper set of holes discharges through ports into the containers while the bottom set of holes are now in the up position for filling.

Still another apparatus is to build a rotary dial similar to the dial on a tablet press. The dial should be much larger, of course, and much slower in operation in order to assure that all holes are uniformly filled with the material.

The type of gadget you make will be influenced by the physical character of the powder you propose to handle. Dry gritty powder is one thing; damp sticky powder another. You have to rely on trial and error.

Ampoule Inspection

Nothing further to report with regard to electronic ampoule inspection. As I said some months ago, I think electronic ampoule inspection will prove to be a fluke. But it may be sufficiently accurate, fast and practical to persuade the FDA to accept electronic ampoule inspection as a standard.

As in tablet counting, I think we are over fussy. To my mind, it is far more important to worry about accuracy in the contents of ampoules and accuracy in dosage than it is to worry about slight cloudiness in the solution and the possibility of glass contamination. There is far more glass in the ampoules after the doctors get through breaking the necks off than there was before. There are plenty of instances of deaths caused by over-dosage of tablets and other forms of medicaments, but I don't think there have been nearly as many instances caused by ampoule medication. I don't recall of ever having heard of a case where a person died of embolism caused by lint or glass in the ampoule. There may have been some cases, but I don't recall having read of any.

The curious thing about ampoule manufacture is that manufacturers will bend over backward until their heads touches their heels in order to turn out ampoules that are clear, sparkling and brilliant and at the same time they will turn these ampoules out in a factory that is anything but sanitary. It doesn't make sense to me. Moreover, some manufacturers are careless with respect to all their other products, and over particular with respect to ampoules. How come?

I hope the newly formed Parenteral Products Manufacturers' Association will be able to devise practical standards for ampoule filling and finishing that the FDA will be persuaded to accept as being the best commercially obtainable.

Cream Chilling

The Frigidaire people make a small unit cooler consisting of coils, compressor and fan which can be mounted in a tunnel enclosing a cream cooling belt. The unit works very well. In this connection, there is a point which should be remembered, and that is, when you chill creams by mechanical means there is danger of condensation when the creams are discharged from the cooling tunnel into the warm atmosphere of the packaging room. It is for this reason I have always advocated air-conditioning packaging rooms. When a lot of cream is handled, air-conditioning will pay for itself within a very few years in increased production, you can obtain a higher rate of output speed; you will have fewer delays and stoppages.

When you consider cooling creams by artificial means, be careful. Cosmetic emulsions embrace a wide range of stability and gel or crystallizing characteristics. Some creams can be shot directly from the warm state into an almost sub-zero atmosphere with no trouble at all. Other emulsions will break or would become grainy. I have seen cosmetic emulsions, which, after being poured hot could not again be distrubed without changing the consistency of the cream. As a matter of fact, the consistency of such creams actually is changed by the woman, who, in using the product digs into the jar with her fingers. So when you are looking into a quick cooling problem, watch your step.

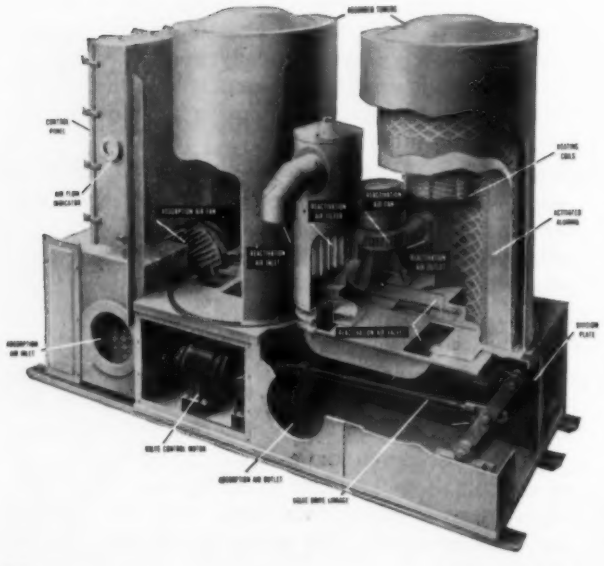
The nice thing about air-conditioning the entire department is that cooling tunnels are not necessary, and because the maintained atmosphere is around 75°, hot filled creams cool naturally without any danger from condensation.

Unit Packaging

I have just received from my friend, Lloyd Volckening of the Ivers-Lee Company, a beautifully illustrated bulletin describing the service of Ivers-Lee to the industry. As most of you know, this service included packaging, in unit packages, of all manner of tablets, pills, capsules, powders, and even pastes, in various types of heat sealing papers. The service also includes the sale

take a page from the Navy's Book...

Operation Zipper



DRY atmospheres—30% humidity or less—afford protection against rusting, mildew and corrosion. The Navy established this fact, then executed "Operation Zipper" for preserving inactivated ships.

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Manufacturing goes forward smoothly when it's carried on in constant humidities. Raw materials and finished products are safely stored for indefinite periods without danger of deterioration caused by too much moisture. You speed up and save on production. You avoid losses in storage.

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of tablet and hypodermic counting equipment. The Ivers-Lee Company with its Sanitape machines, occupies a unique position in the drug industry throughout the world, and for many years has done an exceptionally fine job of packaging the products of its customers. These packaging procedures, incidentally, are physically controlled so that it is impossible for any customer's product to be mixed with another's. Each lot is packaged in an enclosed room. This is one layout where partitions are necessary in a packaging department.

In addition to physical control of the kind indicated, the company also provides a very careful laboratory control. This outfit has certainly done a very swell job over the last twenty-odd years.

Yardsticks

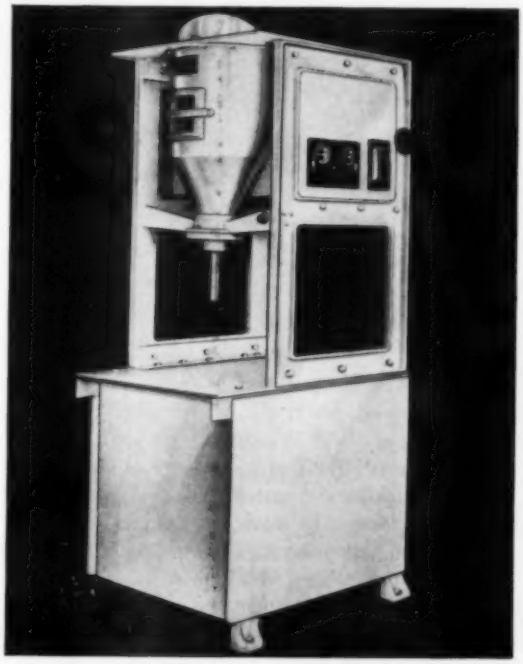
I wish the various trade associations in the drug and cosmetic industry would make a detailed study of members cost ratios so that the trade generally could have yardsticks by which to measure individual performance. Some information is given in the reports of listed companies. For example, ratios of inventory to sales and ratios of plant investment to annual sales is given for many companies. More detailed information than this is generally needed. For example, manufacturers often wish to know what percentage of their sales they should spend for the compensation of detail men, or other salesmen. They want to know what percentage of sales throughout the trade should be devoted to shipping expense. A manufacturer recently asked me what percentage of his net sales should be spent for operating his billing department. He had the impression that his billing department was much too large for the amount of business done by his company. Figures like this, unfortunately, are usually buried and have to be dug up because of the way accountants dump everything into general accounts. Shipping expense for instance will include the cost of operating your own trucks, purchased trucking, freight, express and parcel post, packing materials, stock and packing room labor and the usual space charges. Such an account will give you the total cost of shipping which is only incidentally helpful. But if you want to know the comparative cost of operating versus buying trucking service, you have to dig out the figures.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

New Powder Filler

Simple dial adjustment controls package fill time. This allows accurate changes for any type of material. Auger speed is variable and independent.

Package transfer time can be easily set by a dial to accommodate the slowest or fastest operator. The settings for both transfer time and filling speed are completely independent of each other. Cams are eliminated. No clogging of bearings possible in filling because all mechanisms are above the auger and tube. The bottom portion of the machine has no moving parts at all. Tested under actual factory working conditions the new Rodgers auger type Filler has proven its versatility. It will handle pulverized, granular, crystalline or paste materials. It fills all types of rigid or flexible containers. Operating safety is assured by emergency shut-off switch and complete housing of moving parts. The machine has a minimum of mechanical linkage. No tools are necessary to regulate the variables for a



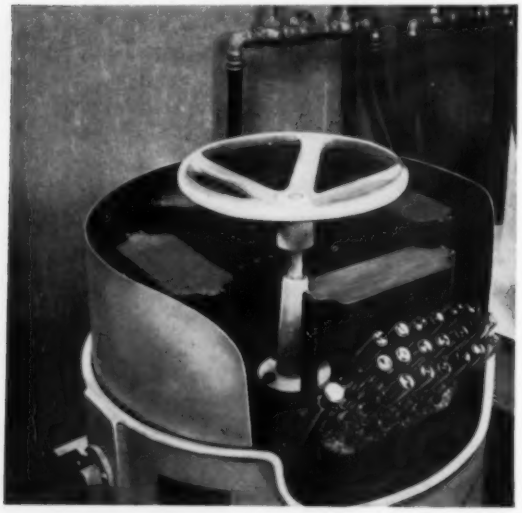
changeover. The Rodgers Filler has a range from 1/3 ounce to 10 pounds, height is 70", floor space 29" x 36", shipping weight is approximately 700 lbs. Demonstration available at their warehouse.

Ampul Washing Machine

The *Akural* Ampul Washing Machine is designed foremost for its practicability in the thorough washing of ampuls. No electrical or motor driven parts are involved, thereby insuring the user against operation costs and loss of time and production from breakdown. This machine is designed on three stages of operation in automatic and orderly sequence. After placing the ampuls to be washed on the washing needles they proceed to the first stage or cold wash where they remain while the operator fills second needle line with next group of ampuls to be washed. This second line when proceeded to first stage automatically advances those at the first or cold wash stage to their second or hot wash stage. Finally by repeating this procedure they are rotated to their final stage where cleansed they are

projected onto air pressure needles, which eliminates the water. Having completely been rotated through the cold and hot wash as well as the air pressure, the washed ampuls drop bottom side up into a retainer untouched and sanitarily prepared.

The Akurat Ampul Washing Machine requires but



one operator. It rejects without breaking the imperfect ampuls. It is compact in design and readily attachable to Water Supply and Waste Lines. Various Liquids such as detergent, distilled water, etc. are independent at various stations and not mixed in operation. It is adapted to thoroughly wash, without adjustment or extra dryers, molds or needles 1cc to 50cc ampuls. The Akurat Ampul Washing Machine requires only a few square feet of floor space and has a capacity of 10,000 to 12,000 ampuls a day, dependent upon the skill and desire of the operator. This is a Torigian development, Akurat Apparatus Works, P. O. Box 77, Queens, N. Y.

High Speed Bottle Washer

This washer, the Load-a-Matic was originally designed to handle large quantities of bottles speedily, and has been adapted for washing any standard size round, 8 or 16 panel new bottles in high speed production. It has the capacity of 6000 to 18,000 bottles per hour, and holds water consumption to a minimum. Water is used only when bottles are in an upside-down position, so the flow is intermittent, synchronized with the automatic placement of each row of bottles in washing position.

Bottles to be washed are dumped base down directly from their original shipping containers onto the large scrambler feed belt, which feeds them automatically to the cleaning mechanism. The bottles are lifted automatically and inserted neck first into the carrier cups of a revolving drum, the bottles, when in the upside-down position, receive a gusher of clean water. Washed bottles continue to travel with the drum until it has completed a semi-circle. When pointing down at a 45 degree angle, the bottles drop out of the holding cups onto a receiving pad, from which push-out arms place the bottles in a vertical position on the conveyer chain in successive single rows. There are other advancements such as self-aligning bearings and magnetic brake for almost instant stopping where desired. This new unit is manufactured by the U. S. Bottlers' Machinery Co., Chicago 18, Ill.

Hydraulic Power Unit

For stacking or tiering, where speed of elevation is important, Lyon-Raymond Corporation offers a hydraulic power unit for their Gydraulic High-Lift Trucks.

The power unit is compact and self-contained, consisting of electric motor, hydraulic gear type pump, valves, oil reservoir and necessary controls. It is available with either a ½ H.P. or ¾ H.P. motor, choice depending on the capacity of the truck and the speed of elevation required.

Twenty-five feet of conductor cable complete with plug is standard equipment and self-winding cable reels are available as an optional extra. Unless otherwise specified, electrical equipment is furnished for use with a regular lighting circuit.

The danger of overloading is eliminated by a factory-adjusted relief valve in the hydraulic system.

Illustration shows the power unit installed on the telescopic High-Lift Truck for which it is strongly recommended because of the range of elevation.

"that's it in the blue bottle"

Color stops the eye, starts the sale . . . **pack to attract in**

Maryland Blue

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MORE EYES REACH FOR YOUR PRODUCT IN CARTONS OF COATED LITHWITE*... the quality clay-coated paperboard

Eye-catching quality on the shelf! Smart, crisp *clay-coated* cartons with "reach-for-me" brilliance! It's *Coated* Lithwite that has made such packages *practical* for mass merchandisers. Performance-proved for 8 years. *Coated* Lithwite is the revolutionary clay-coated paperboard that is made in *one* straight-through operation. Today, *Coated* Lithwite, together with Gardner-Richardson carton craftsmanship, is responsible for the eye-catching plus of millions of stand-out packages on retail shelves. While production is currently sold up, it is not a day too soon to investigate *Coated* Lithwite as a practical means of up-grading your cartons.

Whiter. Brighter. Takes inks brilliantly. Coated Lithwite's smooth chalk-free surface takes plate impressions uniformly, brings up colors vividly. Rub-resisting. Fade-resisting. Easier to glue. Performance-proved for 8 years.

A product of THE GARDNER-RICHARDSON CO.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

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Rx for a grinding headache

A corner of our Test Grinding Department

Is finer grinding a problem with you? More uniform particle size? Less variation in your mixtures of pulverized materials? Lower milling costs? If these things have become a "headache" with you, here is a proved "prescription" for a solution to such problems.

1. **Send for your copy of our Confidential Test Grinding Data Sheet.**
2. **Upon receiving it, fill it out completely, returning it to us with a production sample of the material you desire to grind.**
3. **Your information will be carefully checked in our Laboratory against the data and experience gained through the making of over 43,000 tests on all kinds of materials, during the past 23 years.**
4. **Your material will then be given carefully tabulated test grinds on regular production MIKROS in our Test Grinding Department.**
5. **A complete report will then be rendered to you outlining the proper procedure for your operation, giving you full information as to our findings.**
6. **Definite recommendations will then be made as to the proper size and type of equipment you should use in your operation complete with adequate performance guarantees and specifications, based on the study of these test results.**

This procedure can provide you with an unfailing guide to improved pulverizing operations in your plant . . . a recommendation that will give you the only practical basis to keep fine and ultra-fine grinding from becoming a "headache."

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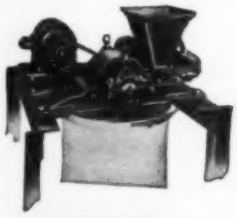

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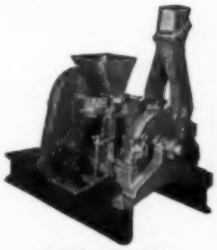

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NOW...2 TYPES TO MEET MOST PULVERIZING NEEDS

MIKRO-PULVERIZER (FINE) **-ATOMIZER** (ULTRA FINE)
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Step Up CLEANING and FILLING with this time-saving team

The E-Z Two-Tube Cleaner

Model B-2 Semi-Automatic Vacuum Filler

WHEN used in combination, these machines can clean and fill 50 to 75 gross of containers per 8-hour day. Both units are simple to operate and are automatic except for placing or removing containers. Both machines handle two containers simultaneously. Both are portable—simply plug into lighting circuit.

The E-Z TWO-TUBE CLEANER efficiently removes foreign matter from new containers by means of compressed air. Floor space 27" x 14". Write for Bulletin.

THE MODEL B-2 SEMI-AUTOMATIC VACUUM FILLER is the new, improved filling unit that handles most any liquid from any size supply containers and fills any containers from AGST size to 4" diameter. Has outstanding new features. Write for Bulletin.

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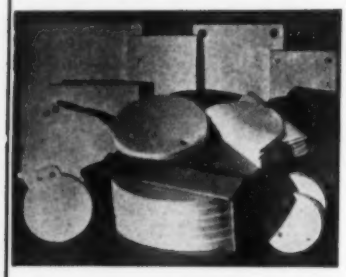

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Uniform-Dependable

A consistently reliable filter media is pertinent to proper filtration. *Filpaco Filter Papers* insure accurate and dependable results. Working samples furnished upon request. Advise Sizes desired.

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Stainless Steel
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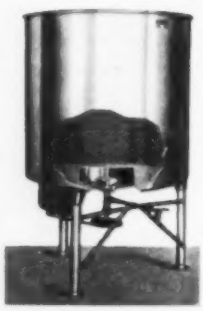
Precision-built of 18-8 stainless steel. Specifically designed for mixing and storing. Durable construction to provide trouble-free utility. Glass-lined steel tanks of various capacities also available.



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Ideal for filtering moderate quantities . . . Can be used for nearly all liquids . . . Simple scientific design . . . May be used with filter paper, cloth, or asbestos pads . . . Filter media can be easily replaced without disconnecting any fittings.

Write for technical data and literature on these and other FILPACO PRODUCTS.

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1. Turbine head near bottom of tank starts a converging horizontal flow which carries sedimentary material into close-fitting rotor vanes.
2. Inflowing "slurry" is violently agitated at high velocity and projected upward toward surface.
3. A submerged baffle-plate deflects the rising current horizontally toward sides of tank, thence flowing downward toward bottom.
4. Rapid down-flow submerges and wets out floating material, including additives being fed into the mix.
5. The entire batch is deflocculated resulting in a perfect dispersion.
6. No surface boil . . . no vortex . . . NO AIR DRAWN IN.

The Eppenbach HOMO-MIXER is built on an entirely new principle. Whereas ordinary mixers create a vortex in the material that pulls in air, the HOMO-MIXER draws only from the bottom of the tank. Entrapped air tends to cause separation and splitting, and frequently oxidizes the product.

Furthermore, the HOMO-MIXER does not require a high head of liquid to give efficient mixing action. It is possible to process material in a tank at a depth just great enough to cover the mixing head. Fits tanks of all types and shapes . . . no clamps required . . . no special angle of installation.

Write for complete details of this mixer—"the only one of its kind." Ask for Catalog No. 402.

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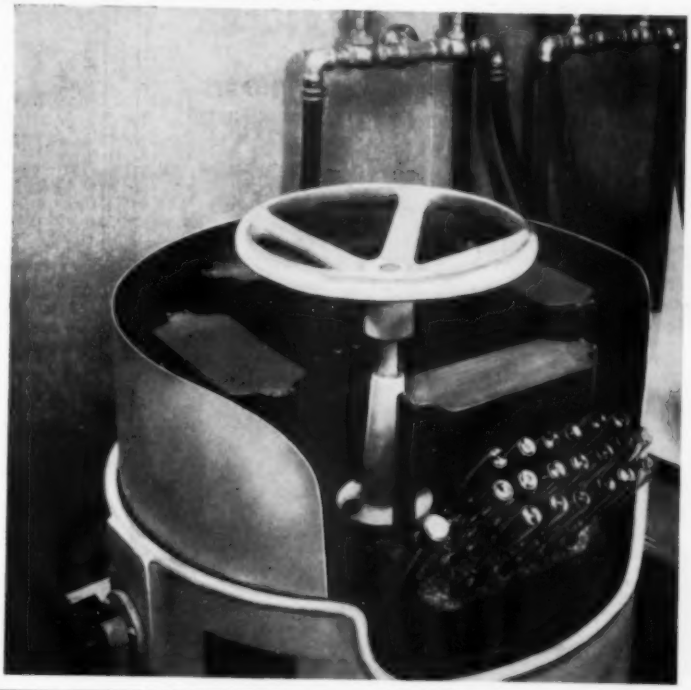

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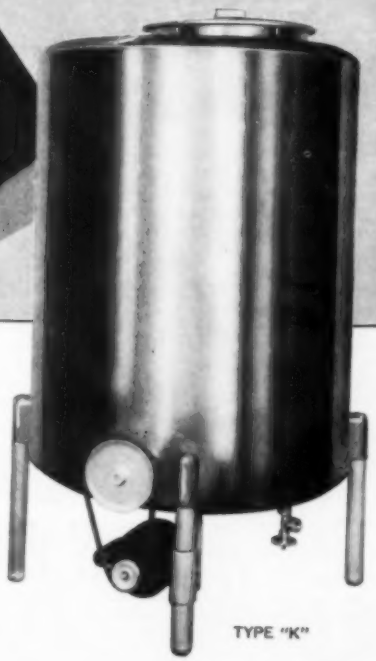
Regardless of what your chemical storage or mixing problem is, a San-I-Tank can simplify it for you—economically and safely. All San-I-Tanks are built by tank specialists. Constructed throughout of 18-8 Stainless with all welds ground smooth and polished. Completely self-draining, sanitary and rust proof. Many extras available such as covers, motors, agitators, etc. Let our engineers give you recommendations on your tank problems.



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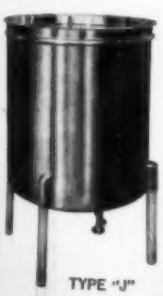

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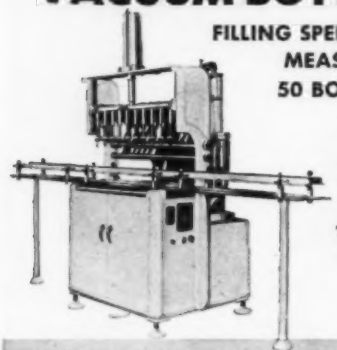
We carry a complete line of stock sizes in San-I-Tanks. If we do not have a Standard tank to fill your need our Engineering staff is at your disposal to design and build a tank best suited to your requirements. If it's a tank problem, get in touch with Metal-Glass today,—we can solve it for you.

METAL-GLASS PRODUCTS CO.

Dept. D BELDING, MICHIGAN

THE NEW ERTEL "Pneumo-Vac" VACUUM BOTTLE FILLER

FILLING SPEED
MEASURED IN QUARTS—
50 BOTTLES PER MINUTE



The "Pneumo-Vac" is operated by a balanced foot valve which allows the operator full use of both hands and reduces physical effort to a minimum. Drippage is positively prevented while unit is in operation. Liquid filling heights, for 3" to 13" bottles, can be quickly regulated. Illustrated "Pneumo-Vac" bulletin gives full information. Write for your copy.

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KINGSTON NEW YORK
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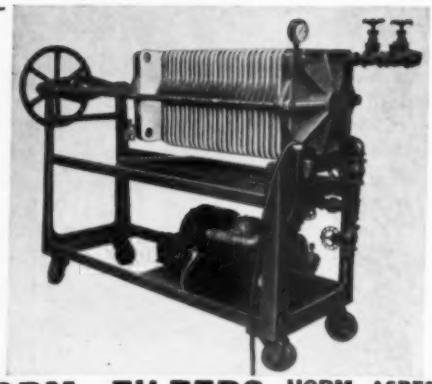

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HORM ASBESTOS FILTER PADS

Horm Filters for filtration, clarification, polishing, are designed so that no liquid can by-pass the filter element. They are unsurpassed for drug, chemical and cosmetic preparations.

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- No rubber washers used
- Adaptable to all types of filter mediums
- Rapid change of filter pads
- Construction Stainless Steel or Bronze (nickel plated)
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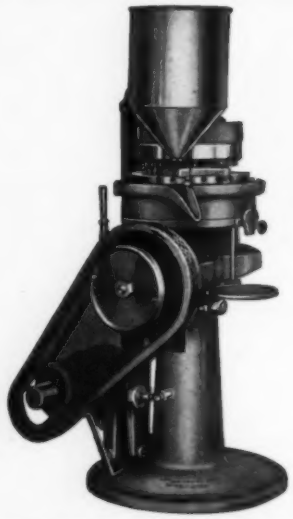
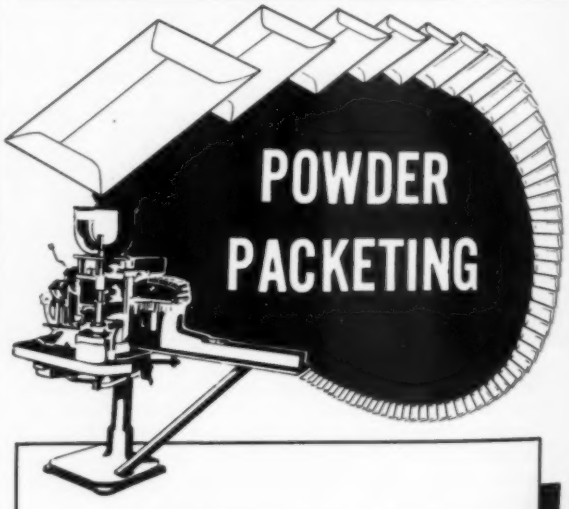


A NEW COLTON ROTARY TABLET PRESS
SERIES 200-25 ROTARY TABLET PRESS

The design of the Series 200-25 Tablet Machine is an outstanding engineering achievement, the culmination of years of experience in building tablet machines. This compact machine incorporates refinements that provide an entirely new standard of performance for this type of equipment.

ARTHUR COLTON COMPANY
2620 East Jefferson Established 1884 Detroit, 7, Mich.



Packeting powder, or any dry, free flowing product such as pills, granules or crystals, with Brown Automatic Bag Filling Machines, fills packets uniformly, prevents filling losses, and completely protects the product. Build sales volume and profits with Brown Bag equipment.

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A List of Nationally-known REPEAT Clients will be mailed you on request

AVAILABLE EQUIPMENT
for Immediate Delivery

1—Progressive 2 piston automatic jar filling machine.
5—100 to 400 lb. dry powder mixers and sifters.
15—New stainless steel tanks from 30 to 200 gallons.
15—New stainless steel steam jacketed kettles from 30 gallons to 200 gallons, jackets also of stainless steel.
15—Eureka, Stokes, Colton, tablet presses single punch and rotary type from 3/8" to 3".
1—Late type Ayres tablet counting machine.
3—Fred Goat, Pneumatic scale, Capem cappers.

"CONVEYORS"
Live belt conveyors built to your specifications complete with workboards, speed reduction unit, completely motorized, reversible switches, built for light and heavy duty.

5—Stokes and Smith, Day auger type powder fillers.
10—World-Ermold-National semi-automatic labelers.
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"LITTLE CHAMP VACUUM FILLER"
Little Champ 8 spout straight lined vacuum filler adjustable for filling containers from ½ oz. to gallons for diversified liquids, can be supplied in either bronze tinned or stainless steel. Practically immediate delivery. Visit our showroom for demonstration.

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8—Ertel U. S. Alsop filters complete with pumps and motors.
10—New stainless steel 8 spout syphon fillers.

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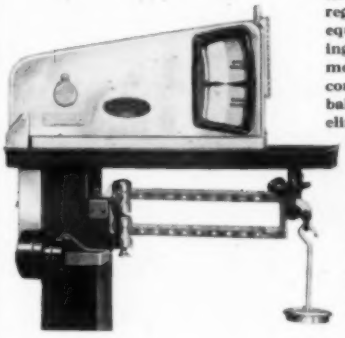
EXACT WEIGHT SCALES are Sound Equipment for Drug and Cosmetic Operations . . .



EXACT WEIGHT Indicating Attachment Model No. 4016 for regular platform scales. Ideal equipment for large compounding operations. These attachments substitute visible weight control for guesswork beam balancing, save in overweight, eliminate underweight, materially speed up your work. Actually this simple deviae transforms an ordinary scale into a precision model at low cost. Users report savings in time and product from two to ten times the cost of the attachment. Fits any platform scale regardless of capacity.

EXACT WEIGHT Scale Model No. 109B is expressly designed and built for tablet and capsule counting by weight. The operation is generally handled by actually counting the sample number of tablets or capsules wanted and placing them in the left scoop. The right scoop is used for counting, operation after operation. Nickel Silver Scoops in three sizes: A—5" X 9"; B—5½" X 11"; C—6½" X 13".

Standard capacity of scale 3 lbs. Other weights to specifications.

EXACT WEIGHT Shadograph—a revolutionary new principle in precision weighing, substituting a light ray for mechanical indication. Electrically operated, noiseless in use, high speed operation, extremely high accuracy. Ideal unit for fine compounding of exacting formulae. Excellent equipment for high speed production line checkweighing. Unit can be supplied with scoop or platter as ordered. Capacity and visible accuracy to specifications of the operation.

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Exact Weight Scales

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Here's what you'll like about the new

...“HAGERTY HANDY FILLER”

- Durable
- Moderately priced
- Eliminates spilling
- Simple to operate
- Convenient sizes
- Light construction

The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

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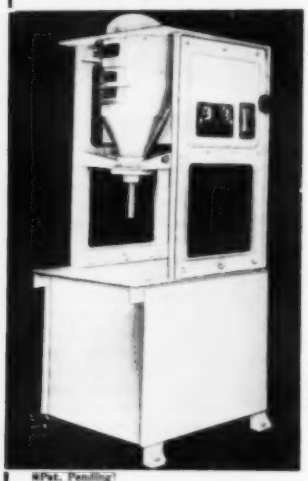
Est. 1849

THE NEW *RODGERS* PACKAGE FILLER



- **SIMPLE DIAL ADJUSTMENT** independently controls package fill time and package transfer time.
- **WILL HANDLE ANY** package from ⅓ oz. to 10 lbs.
- **PROMPT DELIVERY NOW** available on limited number of machines.

[Pat. Pending]

The Rodgers Co. also manufactures:

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- PACKAGE FILLERS
- CARTON SEALERS
- TUBE AND JAR FILLERS
- TUBE CLOSERS
- TUBE CLIPS
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Faster Filling
OF BOTTLES, JARS, TUBES AND CANS

Use this Anderson Filler, Model C-2, for liquids, semi-liquids, creams, pastes and greases. Dispensing capacity up to one pint per stroke. Fills practically all types of containers . . . jars, bottles, cans or tubes. The machine is fast, easy to operate, sanitary and easy to clean. Write for prices and full details.

Ask for Bulletin No. 1-24

ANDERSON BROS. MFG. CO.
ROCKFORD, ILLINOIS

Anderson Fillers

HANDLES PASTES, CREAMS, LIQUIDS AND SEMI-LIQUIDS

CONSOLIDATED OFFERS

1—World automatic Straightaway Labeler.
1—No. 5 Sweetland Filter, 20 copper leaves.
1—Stokes Auger type Powder Filler.
1—Semi-automatic Labeling Machine.
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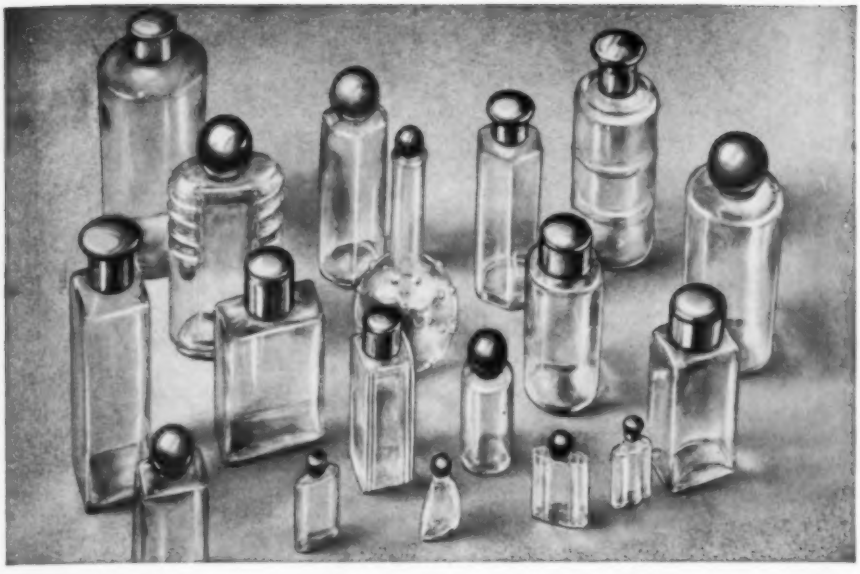

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Studies on Seasickness

Working with large, unselected groups, D. B. Tyler (*Am. J. Physiol* 146:458, 1946) made controlled studies of some of the factors influencing the incidence of seasickness. His report deals with three such factors: (1) the effect of a placebo (psychogenic factor), (2) the effect of body position and (3) the prophylactic actions of various belladonna alkaloid and barbiturate preparations. Some 60 experiments were made involving more than 15,000 unselected young men. There was no "placebo" effect. The incidence and the severity of sickness which developed in groups receiving a placebo and in untreated control groups were of the same order. It was found that the position of the body, the head, or both is a potent factor in determining the incidence and severity of seasickness. Scopolamine alone or combined with hyoscyamine, atropine or certain barbiturates is an effective medication.

Ion Exchange Resins as Antacids

Ion exchange resins offer definite advantages as antacids, according to G. J. Martin and J. Wilkinson. In their report in *Gastroenterology* (6:315, 1946), it is stated that anion exchange resins (e.g. "Amberlite IR-4") are nontoxic and in doses of about 12 Gm. offer antacid action superior to the agents usually employed for the neutralization of gastric acidity. The key to the successful employment of the resin is the particle or mesh size. Thus, a single gram of 200-mesh resin will raise the pH of 50cc. of gastric juice from 1.0 to 5.0. Resin antacid acts quickly, completely inhibits peptic activity without acid rebound, does not disturb the mineral balance, and does not cause diarrhea or constipation.

Aminothiazole for Thyrotoxicosis

Observation of the prevalence of goiter among French workmen employed in the extraction of aminothiazole led M. Perrault and D. Bovet (Lancet 1: 731, 1946) to experiment with this drug for the treatment of Thyrotoxicosis. On the basis of results with 129 patients, they conclude that aminothiazole is of greater therapeutic value and better tolerated than thiourea and other antithyroid drugs. The effective dose is about 0.4 Gm. daily; initial doses of 0.6 or 0.8 Gm. may be given. After improvement, a maintenance dose of 0.3 Gm. or less is sufficient. This quantity is divided into three doses and taken orally after meals, with 0.05 Gm. of nicotine acid for each 0.1 Gm. of aminothiazole. The drug may provide a complete cure in mild or early cases and may also be used preoperatively when surgery is required in advanced and severe forms of the disease.

Penicillin for Diphtheria Carriers

The value of locally-acting penicillin preparations in the treatment of diphtheria carriers is indicated in the study made by R. A. Kocher and W. J. Siemsen (*Ann. Int. Med.* 24:883, 1946). Of 31 diphtheria carriers treated with penicillin lozenges (one every hour) and penicillin nasal spray every two hours, 23 cleared promptly. Cultures became negative one to ten days after treatment was begun. Enlarged cryptic tonsils were found in the 8 patients in whom positive cultures persisted. Following tonsillectomy, cultures in 7 were consistently negative and, in the eighth case, became so after use of pencillin lozenges and spray. Treatment of one case with lozenges only was ineffective; addition of the nasal spray was promptly effectual. Each lozenge contained 500 or 1000 units of penicillin; the spray contained 1000 units per cc. Five consecutive nose and throat cultures served as criteria for negativity. Treatment of 4 diphtheria carriers with intramuscular injection of penicillin, 25,000 units every two hours for seven days (total 2,100,000 units), failed to produce negative cultures.

Vitamin C for Tonsillar Bleeding

According to H. Neivert and his associates (*Arch. Otolaryng.* 43:568,-1946), the incidence of hemorrhage following tonsillectomy may be reduced by vitamin C therapy. They report that, in 246 patients receiving no vitamins, the incidence of secondary tonsillar hemorrhage was 8.5 per cent, as compared to 4.1 per cent in 197 patients given 300 mg. of ascorbic acid for three to six days prior to, and for one week after operation. All patients had received liberal amounts of acetylsalicylic acid for analgesia. Because the hypoprothrombinemia caused by the salicylate is a major factor in secondary tonsillar bleeding, the results of vitamin C therapy may indicate a protective effect exerted by the vitamin against drug-induced prothrombinopenia. The protective effect, it is stated, is probably due to the detoxifying action of ascorbic acid.

Emotion and Gastric Secretion

Surprising results were obtained by Floyer and Jennings (*Lancet* 2:356, 1946) in their investigations on the changes in gastric secretion caused by emotional stress. Twenty students awaiting the results of a Medical Board examination volunteered to co-operate in the investigation, which took place on the day the results were to be announced. All the volunteers either went without lunch or had an early light carbohydrate meal. The technique used was to draw off as much as possible of the fasting secretion, and then to give a gruel meal. Initial samples were taken to determine the free hydrochloric acid and total acidity, and the presence or absence of starch or bile. Further samples were then taken at intervals during the hour preceding and the hour following the declaration of the results. The atmosphere of tension in the room was deliberately increased. Of the twenty candidates, sixteen passed and four failed. The results of the test meals, which are published in a detailed table in the original report, show that there was no evidence of hypersecretion, and no significant change was caused by elation in the successful candidates or by depression in the four who failed.

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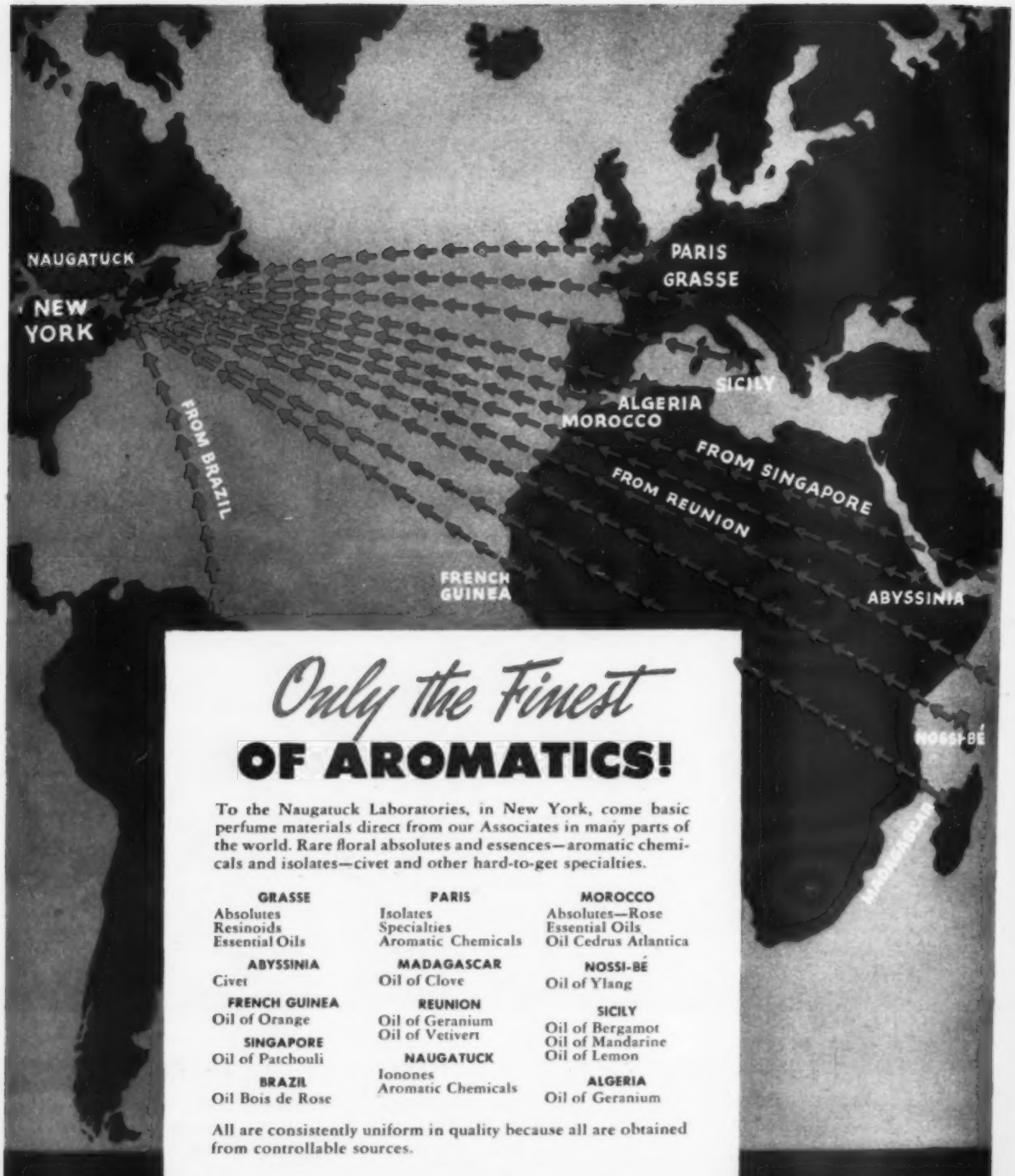

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Litmocidin, New Antibiotic

In the *Journal of Bacteriology* (51:649, 1946) G. F. Gause reports the isolation of a new variety of *Proactinomyces cyaneus* from a sample of south Russian soil and named it *Proactinomyces cyaneus-antibioticus*. It produces an antibiotic substance of a new type, representing a derivative of anthocyanidine. The new antibiotic represents a litmus pigment with antibacterial action and has the designation of "litmocidin." It inhibits strongly the growth of staphylococci, streptococci, tubercle bacilli and Vibrio comma, whereas its action on dysentery bacilli is moderate and there is practically no action on typhoid and colon bacilli. The bacteriostatic action is not inhibited by blood serum. The unit of activity of litmocidin is that quantity of the substance which is just sufficient to inhibit completely the growth of Staphylococcus aureus in 1 cc. of broth. One cc. of a two day old agar culture of P. cyaneus-antibioticus contains 2,000 units of litmocidin. The same issue of this Journal (p. 655) also carries a report by M. G. Brazhnikova on the isolation, purification and properties of litmocidin.

Potassium Chloride in Infantile Diarrhea

A new plan for the treatment of diarrhea in infants has been presented by C. D. Govan and D. C. Darrow (*J. Pediatrics* 28:541, 1946). In their method the various procedures which have been employed during the past twenty years are followed except that replenishment of body electrolyte is accomplished by adding potassium chloride to the solutions containing sodium chloride, sodium lactate and glucose. In all severely ill patients blood or plasma infusions are also carried out. The results obtained with the new treatment in the last half of the diarrhea season are compared with the results obtained with the old treatment during the first half of the diarrhea season. The two series of cases were of comparable severity. With the new treatment 3 of 50 patients died; with the conventional treatment 17 of 53 patients died. The decrease in mortality was not accompanied by a shortening of the duration or a decrease in intensity of the diarrhea. Administration of potassium chloride in conjunction with the other established procedure enables the babies to recover from some attacks of diarrhea that would otherwise be fatal. Potassium intoxication with complete heart block developed once, but recovery followed treatment. Five patients developed intense erythema followed by desquamation. This complication did not otherwise alter the course.

Histamine in Migraine Treatment

Results of histamine injections in the treatment of 75 selected cases of primary migraine or cases in the initial phases of vasoconstriction are reported by W. A. Thomas and S. Butler (*Bull. New York Acad. Med.* 22:125, 1946). It is the opinion of these workers that persons with migraine are not sensitized in the allergic sense but rather exhibits degrees of lowered histamine tolerance, and that successful therapy therefore consists of production of increased tolerance. This may come about, they believe, through increased production of histaminase, which is then available in the body to neutralize or destroy the histamine. Because histamine is rapidly eliminated from the blood, it was ejected intravenously with caution over a period of 6 to 10 hours, to the limit of the patient's capacity, using a solution containing 1 mg. of histamine base in 500 cc. of isotonic saline solution. Sixty-six patients experienced partial to total relief. Migraine equivalents (e. g. paroxysmal tachycardia) also responded to injection of the acid phosphate.

Gelatin Sponge in Neurosurgery

Although gelatin sponge is now available commercially, W. D. Abbott and F. C. Coleman (*J. A. M. A.* 132:329, 1946) call attention to a new practical, economical and efficient method of preparing this material for use in the control of troublesome venous oozing in neurosurgery. Their procedure for preparing the sponge is as follows: A sheet of gelatin U. S. P. 22.0 cm. by 8.0 cm. by 0.1 cm. is cut into strips 1.0 cm. wide and 3.0 cm. long. These are placed in a pyrex test tube, and 35.0 cc. of distilled water is added, being sure that all the gelatin is below the surface of the water. The tube is then placed in a boiling water bath for ten minutes. The liquefied gelatin is then poured into a sterile Petri dish. It is allowed to cool and is stored in a cool place until needed. When the gelatin is needed, it is removed from the Petri dish and placed on the instrument tray in a sterile container, so that a piece of the desired size may be obtained. To 1 ampule of thrombin topical, containing 5,000 Iowa units, is added 5.0 cc. of isotonic solution of sodium chloride, giving a concentration of 1,000 Iowa units per cubic centimeter. The gelatin is placed in the thrombin solution for at least one minute before it is used at an operation.

The gelatin pledgets are placed over the desired area, cottonoid strips are laid above it and hemostasis takes place in 10 to 45 minutes. Where there is arterial bleeding, gelatin sponges are not satisfactory. The gelatin pledgets proved to be of value in controlling hemorrhage in a total of 83 routine neurological procedures. There has been no clinical evidence of local or systemic reaction.

DDT Emulsion for Pediculosis

Despite reports to the contrary, there still seems to be fear of possible danger in the use of DDT for pediculosis capitis, and in consequence its use is not widely favored. Of significance in this connection is the report of A. D. Frazer (*Brit. Med. J.* 2:263, 1946) on the successful use of this insecticide, without ill effect, on 400 patients during an eighteen month period. At first a 4 per cent solution of DDT in liquid paraffin was used but later the following emulsion was employed:

DDT	2 per cent
Naphtha	15 " "
Emulsifying agent	5 " "
Water	78 " "

Treatment with the resulting clear, colorless fluid is rapid and easy and washing of the hair prior to treatment is unnecessary. The emulsion is thoroughly worked into the hair and scalp with a two-inch (5-cm) paint-brush. The patient is then free to go home, and is directed to wash the hair before attending the following day. At this visit nits are removed with a nit-comb. Usually one combing is sufficient, but if the hair is heavily infested two or more may be needed. No signs of tolerance have been found, except that in one case, where the woman had extensive impetigo as well as pediculosis, the nose, forehead, and eyelids were inflamed and swollen the next day. This reaction disappeared in a few days.

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Compounder's Corner

Dental Preparations

Some interesting views are expressed by A. J. Clement (*Manuf. Chem.* 17:434, 1946) in his discussion of the formulation of dental preparations. It is his opinion that in seeking to grade such products according to effectiveness, classification as powder or paste is scarcely worth while, since the only difference between the two types is that a paste contains glycerine, tragacanth or other gums. Classification on the basis of their chemical reactions in terms of acidity or alkalinity is also of little use because neither group can materially alter the *p*H of the saliva, which is a well-buffered medium. Yet another classification is based upon solubility, but this seems to add unnecessary complications to the problem and it is certainly not ideal.

Perhaps the best method of classifying dental preparations would be according to their abrasive properties. But here again there are difficulties, since if all preparations conformed to the necessary standards of safety and utility, the difference in the degree of abrasiveness would be so slight that selection on the basis alone would be impracticable.

The ideal dental preparation contains an abrasive agent, an antacid and mucin dissolving factor, a detergent, a coloring and a flavoring agent. Recently, with professional prescriptions, there has been a tendency to leave out antiseptics; it is argued that their value is questionable because of their short contact with the mouth and their necessarily low concentration.

Clinical evidence shows that neither tooth paste onr powder is markedly superior to the other in effectiveness. Pastes are generally more favored because they are usually pleasanter to use and conveniently applied to the toothbrush.

The American Dental Association Council on Dental Therapeutics has pronounced the following formula as being satisfactory as a tooth powder.

Finely powdered hard soap	**50 m.**
Precipitated calcium carbonate	**935 m.**
Soluble saccharin	**2 m.**
Peppermint oil	**4 cc.**
Cinnamon oil	**2 cc.**
Methyl salicylate	**8 cc.**

The saccharin is thoroughly triturated with the oils, the methyl salicylate and about half of the calcium carbonate. The remainder of the calcium carbonate is mixed with the soap.

Commercial preparations vary considerably, but one representative formula for a dentifrice has been found to contain:

	%
Glycerine	**20.0**
Water	**20.0**
Gums, karaya and tragacanth	**1.0**
Alcohol	**1.0**
Sweetening	**1.5**
Fillers	**to 100.0**

The average formulae for tooth pastes center around the following main ingredients:

	%
Glycerine	**30-40**
Water	**5-15**
Precipitated chalk	**10-15**
Soap	**5**
Methyl salicylate	**3-5**

Other ingredients such as sodium carbonate and bicarbonate, peppermint oil, saccharin, magnesium carbonate, etc., are frequently used.

An average formula for a tooth powder may be:

	%
Precipitated chalk	**80.0**
Soluble saccharin	**0.5**
Methyl salicylate	**1.0**
Castile soap	**5.0**
Sodium bicarbonate	**13.5**

Non-Pyrogenic Water and Infusion Fluids

Because pyrogens in water or other infusion fluids give rise to a febrile condition and a marked reduction in the white cell count on intravenous injection, removal of these bacterial metabolism products is of major importance. Various methods have been devised, among them being the use of activated charcoal to depyrogenize these solutions. The efficacy of activated charcoal for removing pyrogens from water and solutions of pyrogenic drugs has been confirmed by H. Brindle and G. Rigby (Quart. J. Pharm. & Pharmacol. *19:302, 1946*). *In their work, the water under test was shaken at frequent intervals for fifteen minutes with 0.1 per cent of activated charcoal and filtered through a sintered glass filter No. 2C. 3. They found, however, that heavily contaminated materials require more than the 0.1 per cent of charcoal usually employed.*

Tests were also made to determine the amount of medicament or dissolved solids absorbed by the charcoal. From this work it became obvious that charcoal should not be used for depyrogenizing solutions containing low concentrations of active ingredients. However, it is probable that whatever the conditions in actual practice, charcoal will not absorb more than about 35 per cent of its weight of solids from solution. Using 0.1 per cent of charcoal, the maximum loss of medicament per 100 ml. of transfusion fluid will be of the order of 35 mg., which in most cases, but not all, would be insignificant. The usual loss will be much less than this figure.

Fatty Esters of Polyhydric Alcohols in Ointment Bases

The growing importance of fatty esters of polyhydric alcohols (e.g. glycols, glycerine and sugar alcohols) in ointment bases is well indicated by R. Presslie (*Pharm. J. 157:185, 1946*). In his opinion, the ointments of a decade ago cannot match these ester bases for stability, neutrality, appearance and "feel," or in the absorption rates of medicaments for which these bases are the vehicles. With these esters, bases can be prepared to suit the incorporation of any therapeutic substance, whether it be oil-soluble water-soluble or insoluble.

The pure esters are not self-emulsifying although they can increase the water absorption value of inert bases. The esters are available, however, in self-emulsifying form. In fact it is very difficult to prepare a pure, non-emulsifying ester. Self-emulsifying esters contain from 5 to 10 per cent of added soaps, generally potassium stearate. However, soapless self-emulsifying products can be made by the addition of sodium alkyl sulfates to the esters.

The most familiar ester is, of course, glyceryl monosteartae. Glyceryl monostearate ointment bases are easy to

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make; the constituents are simply heated together, with or without water. If one part of glyceryl monostearate is emulsified with two parts of water, a perfectly good ointment base is obtained, but superior stability, texture and utility are obtained by the addition of other fatty materials, as in the two indicative formulas following:

I

Glyceryl monstearate	12
Stearic acid	4
Lanolin	1
Triethanolamine	1
Cocoa butter	2
Water	80

II

Glyceryl monostearate	15
Spermaceti	5
Liquid petrolatum	20
Water	60

The outstanding feature of glycol stearates, says Presslie, is their simplicity in use. Employing self-emulsifying glycol stearate, glycol disearate, diglycol distearate or propylene glycol monostearate, ointment bases maybe made simply by melting one part of the substance in two parts of hot water and stirring till cool. The use of a preservative is advisable in all ointments prepared with these esters. Water-in-oil-ointment bases can also be made with glycol esters, generally the oleates and laurates, but these bases need to be stiffened with stearic acid or spermaceti, as in the following example:

Diglycol oleate	12 cc.
Lanolin, anhydrous	4 Gm.
Spermaceti	4 Gm.
Petrolatum	50 Gm.
Liquid petrolatum	40 Gm.
Water	90 cc.

Fatty acid esters of sugar alcohols (e.g. mannitol, sorbitol) have been made available. Sugar alcohols are hexahydric alcohols, and the stearic, oleic, and lauric acid esters are suitable for ointment base formulation. The oleates tend to form W/O emulsions, and the others O/W. A typical formula is:

Sorbital distearate	25
Cetyl alcohol	3
Lanolin	2
Water	70

Amerchol L-101

"Amercol L-101" developed by American Cholesterol Products, Inc., Milltown, N. J., is described as an improved nonionic emulsifier and penetrating agent. Its active factors are cholesterol, agnosterol, lanosterol, 7-dehydrocholesterol, dihydrocholesterol, ceryl alcohol and melissyl alcohol. These sterols are all present in their free form (as the alcohol); no fatty acids or esters being present in the product. All the components are highly purified natural products treated to remove those sterol fractions which oppose the formation of oil-in-water emulsions. Amerchol L-101 may be used as a primary emulsifier for water-in-oil emulsions and as a secondary emulsifier and stabilizer for emulsions of the oil-in-water type. The emulsions are both chemically and physically stable. They withstand extreme temperature ranges without ill effect.

The emulsions formed with Amerchol L-101 are highly emollient and have the additional advantage of emulsifying very readily with simple mixing and may be packed into jars or tubes while still warm and flowing. They impart excellent texture and sheen to cosmetic products. Noteworthy is the observation that ointments formed with this material have the ability to absorb serious exudates and body fluids.

Penicillin Ointment Studies

Many ointments and creams containing penicillin have been studied by M. I. Neuroth, C. O. Lee, J. E. Christian and G. L. Jenkins (*J. Am. Pharm. Assoc.*, Scient. Ed. 35:321, 1946). Their work indicates that the most satisfactory formulas were those of the oil-in-water type emulsions containing some of the newer wetting agents. The presence of water in concentrations as high as 70 per cent in these bases, if kept at refrigerator temperatures, was not detrimental to penicillin. In fact those of high water content were the most satisfactory. The penicillin in such ointments may be protected by the addition of small amounts of sodium citrate and urea. A satisfactory base embodying these protective materials was prepared from:

Cetyl alcohol	21.0 Gm.
Cetaceum	12.1 "
White petrolatum	21.0 "
Sodium lauryl sulfate	0.3 "
Sodium citrate	3.0 "
Urea	4.9 "
Sterile distilled water	37.7 "

These workers have also developed a new modified technic for the agar cup-plate test which makes it possible to evaluate the activity of penicillin without first having to extract it from the ointment. The availability of penicillin in ointments may be determined by observing the zones of inhibition on agar plates.

Ester Waxes from British Lignite and Peat

According to a report in the Manufacturing Chemist *(17:443, 1946) wartime investigations were undertaken by a British research team to discover a native source of hard ester waxes to replace German montan wax. Their work showed that a satisfactory substitute can be extracted from Devon lignite, and that a slightly inferior product can be obtained from English and Scottish peats. Extraction of lignite on a semi-technical scale was achieved by using an apparatus constructed by modifying a 60-gallon still to make it operate as a Soxhlet extractor; the solvent being acid-washed benzole. By this means 3,360 pounds of lignite was extracted and 130 pounds of crude wax, or 4.4 per cent of the dry lignite, was recovered. The bulked wax had a melting point of 77-84° C., an acid value of 30 and a saponification value of 85. About 49 gallons of solvent was needed for the extraction of each ton of wax.*

The amount of crude wax extracted was increased by using different solvents in the following order: light petroleum, aromatic hydrocarbons, alcohols and benzene alcohol azeotrope. The nature of the wax undergoes a change, however, with increase in yield owing to the increase in the proportion of resinous and asphaltic material. This change is reflected in the melting point, since, as the yield increases, the temperature range over which the wax melts becomes wider and the alcohol-extracted waxes soften continuously over a very wide temperature range.

Extraction of wax from peat was also carried out in a Soxhlet extractor. The yields of crude wax extractable by means of benzene varied from 3 to 12 per cent, and higher yields were obtained by using a solvent consisting of or containing alcohol. It was found that the wax content of peat was apparently determined by the nature of the vegetation from which the peat was derived. Phragmites and Sphagnum peats have low wax contents, while peats derived from cottongrass, heather and Scirpus are relatively rich in waxes.

The properties of the waxes obtained from English and Scottish peats were similar in all respects. They were dark brown, almost black in color, and were hard and brittle in texture and more readily fractured than lignite wax or montan wax. They also differed from these waxes in having lower melting points (by about 10 per cent) and higher acid and ester values.

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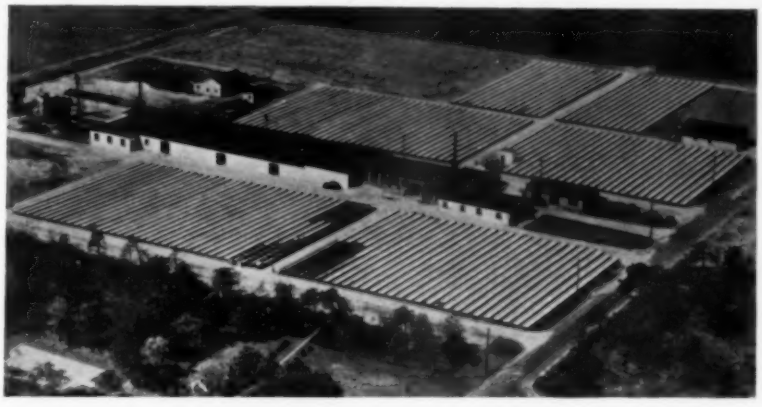

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Clove Oil

In a review on clove oil, G. E. Smith (*Perfumery & Essent. Oil Rec.* 37:143, 1946) states that cloves are distilled in a number of western countries, chiefly from Zanzibar cloves. The finer Penang, Amboyna and Madagascar buds are rarely distilled (except for the Madagascar type in France) though they yield superior and distinct oils. The yield of oil varies slightly with the source of cloves, but it is usually around 17 per cent. In addition to these oils distilled in importing countries from cloves, two other so-called clove oils distilled in East Africa and in Madagascar from clove stems and clove leaves respectively are exported in considerable quantities.

The principal constituent of the commercial oils is the phenol, eugenol. The content of eugenol varies from about 80 per cent in some samples of leaf oil to 95 per cent in the so-called "strong oil" distilled with dry steam from cloves. The only other constituents present in clove oil in appreciable amounts are the phenolic ester acet-eugenol, and the sesquiterpene caryophyllene, which latter constitutes the greater part of the alkali insoluble portion obtained in the assay process for eugenol.

Although the three substances mentioned make up some 99 per cent of clove oil, they are not responsible for the characteristic fresh and almost fruity note of the oil. This is attributable to trace substances, and in clove oil the most important trace substance is methyl-*n*-amylketone.

One of the chief analytical differences between clove oil and clove stem or leaf oil lies in their acet-eugenol content. Clove oil usually contains 10 to 15 per cent of acet-eugenol, whereas stem and leaf oils contain only traces of acetate. By fractionating a sample of genuine clove oil the acetate is concentrated in the later fractions and the last 10 per cent of distallate may contain over 50 per cent of acet-eugenol.

According to Smith, the uses of clove oil fall into two main groups. The first includes applications in medicine, food flavorings and perfumery, while in the second group clove oil is merely a preferred source of eugenol for the manufacture of fine chemicals. For the first group of applications, water distilled clove oil is usually preferred, and the perfumer finds advantage in using the oil from Amboyna or Penang cloves in preference to that from Zanzibar cloves. Medicinally, clove oil is administered internally as an antispasmodic and carminative and it is also used externally as a rubefacient. In dentistry it is used as an antiseptic and local anaesthetic in the treatment of dental caries. Clove oil appears to have positive value as an antiseptic and preservative, differing in this respect from most of the spice oils. As a dehydrating agent it is used regularly by the microscopist.

For the second group of applications an oil with high true eugenol content is obviously to be preferred and high acetate content is equally a disadvantage. It is in this fine chemical field that clove stem and clove leaf oils have become increasingly important as sources of eugenol. In competition with other eugenol sources such as cinnamon leaf oil or pimento leaf oil, the clove oils have some advantage in the fact that their trace constituents are less assertive and consequently it is easier to produce from clove oil a neutral eugenol or an *iso*eugenol or a vanillin which does not faintly but clearly declare its origin.

Extractives from Western Pines

Work done by A. B. Anderson (*Ind. & Eng. Chem.* 38:759, 1946) on the effect of solvents on extractives from ponderosa pine, indicates that it is possible simultaneously to remove and recover extractives as well as remove water. If this solvent-seasoning process proves practical, the treated lumber will be upgraded and at the same time will establish a new source of extractives, including certain essential oils, heretofore unavailable. The selection of the solvent will be governed by a number of factors and this preliminary investigation indicated that solvents may vary materially in their ability to remove extractives from the pine sawdust. Anderson found that the solvents exhibited varying selective extraction action for the various extraneous components in the wood. Thus, the mixed solvent ethanol-benzene was the most effective solvent for removing the water- and ether-insoluble fraction. The water-soluble component was most efficiently removed with methanol. Ethanol-benzene and ethylene dichloride were about equal in their ability to remove resin acids; acetone was most efficient in extracting free fatty acids. The amounts of volatile removed by the various solvents, in the main, were comparable. Benzene extracted the largest quantity of esters and the unsaponifiable fraction was most effectively removed by ethanol and by ethyl ether. The exact nature of the various components of ponderosa pine extractives will have a bearing on their commercial value, and this identification is under investigation.

Catalytic Preparation of Cymenes

The preparation of para-cymene by the catalytic dehydrogenation of terpenes is described in two patents issued on the same day. In the method given in the first patent, U. S. Patent 2,399,739, granted to W. Hull, terpenes, such as dipentine, limonene, terpinolene, and terpinenes, maybe converted to para-cymene by passing their vapors over a catalyst comprising chromic oxide supported on a nonpyrolytic carrier, at a feed rate of 10 to 100 cc. per hour per 100 cc. of catalyst at 425 to 500° C. It is claimed that conversions as high as 90 per cent are obtainable.

In the second method, as given by E. R. Littmann in U. S. Patent 2,400,012, para-cymene is prepared by dehydrogenation of para-menthane and other monocyclic terpenes in the vapor phase over an activated lead catalyst supported on a material with high surface acitivity, such as activated carbon or activated alumina.

Details for preparing and using the indicated catalysts are given in both patents.

Studies on Kissi Pepper

In studies on the extraction products of Kissi pepper made by S. Sabetay and L. Traband (*Ind. parfumerie* 1:44, 1946), the seeds of *Piper famechoni* Heck, from the province of Kissi in French Guinea, were pulverized and extracted with benzene. A concrete essence, in the form of a red-brown syrupy liquid with an agreeable odor, was obtained in 10.47 per cent yield. This had an index of refraction of 1.5320, an acid value of 25.1 and an ester value of 31.3. The Lassaigne reaction for piperine was strongly positive. The perfume content, as determined by distillation with ethylene glycol, was 31.80 per cent. The concrete was con-

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WHEN and by whom the phenomenon of perfume fixation was discovered are mysteries that go far back to the beginning of the perfumer's art. Yet it is upon this early discovery of the fact that certain substances, when combined with the volatile constituents of an odor, tend to retard evaporation and thus, prolong its life, that today's perfume, toiletry and cosmetic business flourishes. For without the proper balance of fixative and aromatic, the finest perfume would possess little more than momentary seductiveness, its appealing fragrance quickly unbalanced by the rapid evaporation of its more volatile parts.

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verted to an absolute essence by treatment with alcohol, giving a yield of 90 per cent. This constitutes a thick red-brown liquid resembling the concrete and having the following properties:

Index of refraction	**1.5360**
Specific gravity	**0.9971**
Acid value	**28.9**
Ester value	**28.9**

The perfume content is of the order of 35 per cent and with an index of refraction of 1.4893.

A fraction separated from the concrete by vacuum was obtained, as a yellowish liquid, with the following characteristics:

Index of refraction	**1.4943**
Specific gravity	**0.8865**
Acid value	**3.3**
Ester value	**12.3**

Ordinary pepper oil contains phellandrene, dipentene, and caryophylline while Kissi pepper oil contains acids, esters, ketones, methoxy groups, and sesquiterpines. It is believed that the extraction products of Kissi pepper can be employed to give a resinoid odor to perfumes and soaps.

Oil of Neroli and Nerolin

According to an article in *The Perfumery and Essential Oil Record* (37:234, 1946)the oil of neroli obtained from the bitter orange tree flowers is designated Neroli bigarade, while that from sweet orange trees is called Neroli petele. Both varieties are used for the distillation of orange flower water. Neroli oil is an essential ingredient in the toilet perfume, eau de Cologne, and, next to alcohol, the most expensive item. so it is only natural to find perfumers employing a synthetic substitute—Nerolin. This is a white crystalline powder with the chemical constitution of methyl *beta* naphtholate and is more economical in use than neroli oil, even if its fragrance is less pleasing than genuine oil.

Oil of neroli is one of the most complicated mixtures of natural constituents and the synthetic substitute is a triumph of the perfumery and essential oil chemists. One outstanding feature of nerolin is its intense fluorescence when viewed in ultra-violet light. The presence of minute traces show up at once in the residue obtained by evaporating eau de Cologne.

The genuine neroli oil is produced in the South of France, but the petals are also collected in the fruit growing districts in Spain, anywhere south of Barcelona to Denia. Cheap female labour is employed for collection of the petals and it requires over 1,000 kilos of these to produce 1 kilogram of oil by distillation. An inferior substitute for neroli is obtained by distilling with steam the leaves and immature fruits found under the orange trees, but it is only suitable as a cheap substitute for soap perfume. This utilization of waste material resembles the use of similar scrap found under the bergamot trees which is used for the production of "bergamotella" oil.

Mint Oil Characteristics

In studies on mint oil reported by A. Hoffmann (*Anais assoc. quim. Brasil* 4:99, 1945) several samples of *Mentha arvensis* were found to have the following principal characteristics:

Specific gravity	**0.895-0.899**
Index of refraction	**1.4590-1.4601**
Specific rotation	**35-41°**

The oils had a menthol content ranging from 70 to 90 per cent, and contained more than 5 per cent esters.

Toxicity of Oil of Chenopodium

In the *Journal of the American Medical Association* (132:330, 1946), W. L. Guyton warns that oil of chenopodium, or American wormseed oil, a part of the physician's armamentarium for the treatment of intestinal parasites, can give rise to alarming toxic symptoms and death, even when given in therapeutic doses.

Wormseed oil, extracted by steam distillation is the volatile oil of the fruit of Chenopodium ambrosioides, var. anthelminticum. This oil is a pale yellow liquid with an unpleasant odor and a bitter, burning taste. The chemical constituents are ascaridole, p-cymene, d-camphor, l-limonene and saponins. Its anthelmintic property is ascribed to the ascaridole content and the toxicity to either the active ingredient or cymene.

Newer therapeutic agents have largely replaced oil of chenopodium, but it still finds use in the treatment of hookworm, roundworm and pinworm infections. It acts by paralyzing the worm rather than by causing its immediate death. The mode of action explains the rationale of following administration of the drug by purgation. Toxic reactions following administration of the drug are not uncommon. The minor toxic symptons are those of nausea, vomiting, abdominal pain, tinnitus, transient deafness, paresthesias, headache, dizziness and general depression. Fatal cases show a predominance of neurologic symptoms with delirium, convulsions, paralysis and coma. Severe and fatal reactions have been attributed to variations in potency of the drug, individual susceptibility, inaccurate measurement of the dose, prolonged use and failure to follow the course of treatment by purgation.

The American literature reveals only six fatal cases with autopsy reports. To this number Guyton adds another instance, with a detailed case history. The findings in this latest fatality are consistent with the previously reported cases.

Perfumed Sponges

According to a note in *Manufacturing Chemist and Manufacturing Perfumer* (17:466, 1946) synthetic sponges are being produced in France by a method which consists of adding sodium sulphate crystals to the viscose during coagulation, to form pores. The crystals are then dissolved by washing. The synthetic sponges are then bleached and colored. Finally, what is claimed to be a permanent perfume is embodied in the sponge.

Solid Perfumes

Perfumes for use in solid form should be carefully selected with regard to their properties. A formula recommended for this purpose as given in *The Perfumery and Essential Oil Record* (37:-236, 1946), is based on acetanilid, used at a rate of 70 per cent. Additional ingredients are 7 per cent perfume, 15-20 per cent synthetic musk, 3-4 per cent heliotropin, 2-3 per cent beeswax, and 5-8 per cent magnesium carbonate. All ingredients except for the magnesium carbonate are melted together and the powder is added to the clear mass, which is chilled quickly after molding.

Cinnamon Substitute from Oat Hulls

In a paper presented at the Fall Meeting of the American Chemical Society, C. Bordensa reported a study of cinnamon oil substitutes derived from oat hulls, a former agricultural waste. Recent experiments at the Southern Research Institute in Birmingham, Ala. revealed sixteen possible cinnamaldehyde substitutes, five of which were found to yield cinnamon-like flavors. The most promising was furanacrolein, which is derived in two simple steps from waste oat hulls.

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Patent Thoughts and Trends

By THOMAS CIFELLI, Jr., Patent Attorney

A Doctor's Prescription on Patents

We all like to figure out things for ourselves and then, just to make sure we are not way off base, we like to compare our views with those whose opinions we respect. Why not try it with patent questions?

For several years of late, a lot of people have written a lot of things about what is good and what is bad about our patent system. Many of those who speak up in favor of the system are patent lawyers, who quite naturally would be expected to think well of it. Many of those who appear rather anxious to emasculate the system do not really know much about how the system works, and they cannot be expected to understand or appreciate it. From the standpoint of our industry many of us would welcome a well-considered expression of views from some of the leading members in our own field. One such person has spoken up recently. He is Dr. Theodore G. Klumpp, president of Winthrop. Perhaps his views will be of interest to many who have not as yet chanced upon them.

Dr. Klumpp spoke upon the effects compulsory licensing would have on drug patents. As we all know, at present a U. S. patent gives the owner the exclusive right to stop anyone from practicing the patented invention for seventeen years. Many people would like to see the exclusive nature of this right curtailed and one of the suggestions along this line has been to compel patent holders to issue licenses to those who desire them. Some proponents of compulsory licensing don't go quite that far but feel that compulsory licensing of patents in fields essential to public health and welfare is justifiable. Obviously, drug patents would fall into these fields.

Dr. Klumpp starts out by saying that if the compulsory licensing proposals would make articles that are essential to health and life available to the public at more reasonable prices he would support the proposals. However, upon close examination he comes to some interesting conclusions.

For one thing, Dr. Klumpp believes that compulsory licenses would retard rather than stimulate progress in pharmaceuticals. He illustrates his point by noting that when one drug concern comes out with a patented product that is commercially successful, it serves as a stimulus to others to find something equal or better. Under compulsory licensing, Dr. Klumpp feels that it will be cheaper to wait for the other fellow to do the inventing and then apply for a license.

The Winthrop president takes a look into the charge that the price of patented drugs is higher than non-patented items. He finds that while the charge is undoubtedly true in some instances this does not give a clear idea of the true picture. High prices don't necessarily go hand in hand with patents. The record of the drug industry in reducing prices of patented drugs is commendable.

Another result of compulsory licensing, in the opinion of Dr. Klumpp, would be to slant the drug manufacturer's efforts in favor of advertising as against research. He feels that the small drug house would not be able to stand the pressure of heavy advertising by the few big houses and not having any more unique or original drug products (because compulsory licensing would result in the other fellow having the right to make products like yours), the drug industry will resemble the soap and cigarette industries.

The emergence of secrecy as the watchword in the drug field would follow compulsory licensing, in Dr. Klumpp's opinion, and the evil consequences to society of such a system are noted.

Finally, our spokesman compares the American drug industry favorably with the English industry and points out that the English have compulsory licensing

With regard to limiting the licensing to fields essential to public health and welfare, Dr. Klumpp has some pertinent thoughts. He cites the numerous recent crippling strikes and decides that there just isn't any isolated material or activity that can claim to be peculiarly essential. Consequently, not being able to draw the line between essential and non-essential fields, such a limited compulsory licensing system would inevitably in practice lead to compulsory licensing for all patents.

Such are the views of one of our industry's leaders.

Patents

There was much activity, patentwise, since the last appearance of this column. More than a dozen patents relating to vitamins, a number dealing with hormones, and several covering a miscellany of drug and cosmetic items were issued. The vitamin patents have been chosen for special attention, simply because space limitations preclude an analysis of all the patents and, moreover, the vitamin patents, as a group appear to be quite important.

Vitamin A

Embree and Shantz, of Distillation Products, obtained U. S. 2410575 for their process for converting anhydro vitamin A into substances exhibiting vitamin A activity. The raw material occurs in fish liver oils, and can also be prepared chemically. It has little or no vitamin A activity. The inventors found that the trick is to treat anhydro vitamin A with an acidic substance, preferably in the presence of a mutual solvent. Organic acids such as acetic, propionic, butyric, oleic and benzoic are mentioned as suitable acids. Methyl, ethyl and benzyl alcohols are noted as satisfactory solvents. The reaction time appears to be rather long, being several days at room temperature. Temperature of—20° C to about 100°c are recited.

Shantz also won U. S. 2410590, deal-

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ing with an improvement in the process for concentrating fat-soluble vitamins, particularly vitamin A contained in fish liver oils. The process involves reacting a glyceride fat which contains a fat-soluble vitamin with primary or secondary amines and quaternary ammonium bases.

The patents on vitamin A processes also include one which may be said to be a synthetic one, as distinguished from the above, which deal with fish oils, as starting materials. Miles, of M. I. T. just received U. S. 2412465, dealing with a process for preparing *ethers* of vitamin A. In addition to claims to the process, Milas obtained claims to precursors of vitamin A ethers, differing therefrom in that the former have a triple bond between carbon atoms 5 and 6 on the side chain instead of the double bond present in vitamin A ethers.

This patent is just one of a number that Milas has received recently on the subject. To get a true picture of his contributions in the field these other patents ought to be consulted. Some of these are U. S. 2369156—2369168, 2382085 and 2382088, all assigned to Research Corporation.

Vitamin B_6

Both Wyeth and Hoffmann-LaRoche received patents on processes for making this vitamin, which is also called adermin and is 2-methyl-3-hydroxy-4, 5-di-(hydroxymethyl)-pyridine.

Szabo is Wyeth's inventor who won U. S. 2410531, which describes a multistep process, starting with derivatives of a normal quinoline. The claims cover the steps of converting the intermediate 2-methyl-3-alkoxy-4, 5 bis (aminomethyl)-pyridine, through the action of H Br, to the corresponding hydroxy derivative, and then diazotizing this derivative to form the vitamin.

Max Hoffer (Hoffmann-LaRoche) received four patents, U. S. 2410938 to 2410941, inclusive, on adermin. His process starts with 2 methyl-4-phenoxymethyl-5-cyano- 6 - hydroxy - pyridine-3-carboxylic acid and involves treatment with P Cl_5, then with hydrazine, followed by formation of an azide, then treatment with boiling alcohol, elimination of Cl in the 6 position and reduction of the CN radical in 5 position to the methyl amino group by hydrogenation with nickel catalyst, and treatment with HNO_2 to convert the methyl amino group to the carbinol. The latter is treated with HBr and the resulting product is diazotized to the vitamin.

In addition to protection on the process, the four patents contain product protection up to and including the 2 -methyl-3-carbalkoxyamino-4-phenoxymethyl-5-hydroxymethyl pyridine.

Vitamin D

Milas in addition to his vitamin A patent also recently obtained a patent covering alkyl ethers of vitamin D. The patent, assigned to Research Corporation, is U. S. 2410893 It discloses the preparation of the ethers of the vitamin by reacting the metallic vitaminates with alkyl halides or sulfates. Examples giving the preparation of the trityl and methyl ethers of calciferol (vitamin D_2) are given. Based on extinction coefficient data, the potency of the trityl ether is calculated to be about 9.5 million International units per gram and, on the basis of a biological assay, it is between 4.75 and 9.5 million U. S. P. XI units. Comparable figures for the methyl ether are 16 million International units and slightly less than 7.5 million U. S. P. XI units respectively.

Vitamin E

Four patents, U. S. 2411967-2411970, were obtained by Hoffmann-LaRoche on work done by P. Karrer and Isler dealing with the preparation of synthetic tocopherols which, on the basis of rat tests, are said to exhibit the full action of the pure vitamin.

The new substances are made by reacting trimethyl-hydroquinone or dimethylhydroquinone with phytol, phytylhalides, or 3-halogeno-dihydrophytylhalides, suitably in the presence of acid condensing agent.

Mixed Vitamins

Carl Andersen, who has numerous patents on organic mercurials, was issued U. S. 2410417 (assigned to Lever Bros.) on his discovery that stable preparations containing both vitamins and minerals could be prepared by coating the particles with a protective substance, such as organic solvent-soluble plastic and resinous film-forming materials. Natural resins, cellulose derivatives, polyvinyl compounds, phenol-formaldehyde, phenol-furfural, urea-formaldehyde, melamine-formaldehyde and polybasic alcohol-polybasic acid resins are mentioned specifically.

Other Patents

U. S. 2,410,406—**(Imperial Chemical)—Mepacrine dihydrochloride.**

U. S. 2,410,431—**(Allied Labs.)—Alkyl mercapto substituted amino benzoic acid alkamine amides (local anesthetics).**

U. S. 2,410,463—**(B. T. Bush, Inc.)—Stilbestrol.**

U. S. 2,410,469—**(Wm. S. Merrell)—Aryl alkyl amino alkones (for controlling contractile tissue).**

U. S. 2,410,518—**(Neuberg and Roberts)—Glycerin from sugar by yeast fermentation.**

U. S. 2,410,619—(Kodak)—**(Sulfamyl benzotriazoles.**

U. S. 2,410,620—**(Kodak)—Sulfonamido-benzimidazoles.**

U. S. 2,410,772—**(Butler et als)—Sulphonamides.**

U. S. 2,410,796—**(May and Baker)—Soluble amidine salts.**

U. S. 2,410,793—**(Am. Cyanamid)—Sulfonamide pyrimidines.**

U. S. 2,410,848—**(Hoffmann-La Roche)—Derivatives of 3, 4-dihydroxy-thiophan.**

U. S. 2,410,949—**(Hoffmann-La Roche)—Sarcosin anhydride—containing preparation suitable for injection.**

U. S. 2,411,169—**(Armour)—Isolation of dehydrocholic acid.**

U. S. 2,411,172—**(Squibb)—Pregnane series compounds (precursors of progesterone).**

U. S. 2,411,177—**(Squibb) Antirachitic agents.**

U. S. 2,411,201—**(Forkner)—Improving fat sand oils by addition of olive and coconut color, odor and flavor derived from olive and coconut juices.**

U. S. 2,411,252—**(Finman)—Beautician's finger-comb (a time saver).**

U. S. 2,411,283—**(Geigy)—Piperidino-ethanol ester of di-N-butyl acetic acid. Antispasmodic.**

U. S. 2,411,495—**(Schering)—Sulphonamides.**

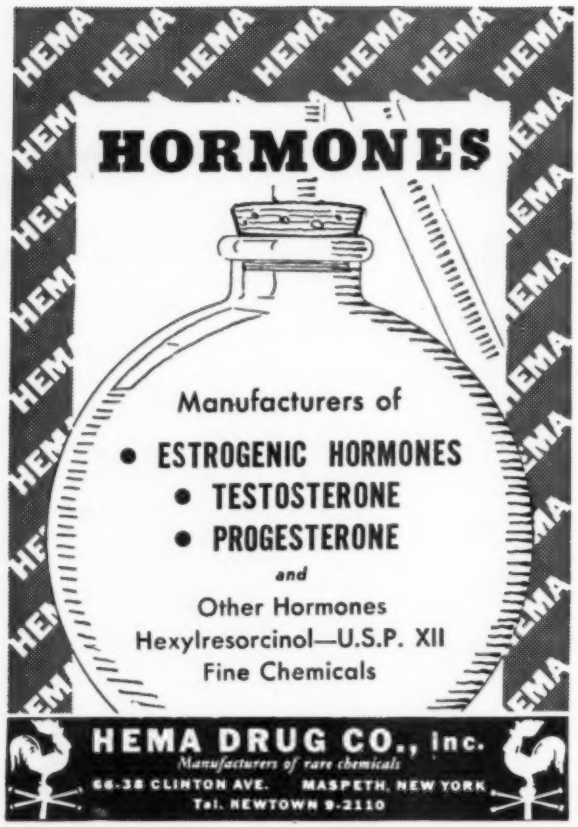
U. S. 2,411,516—**(Resinous Products)—Ethers of endoethylene-substituted cyclopentanols. (Pharmaceutical intermediates).**

U. S. 2,411,611—**(Hoffmann La Roche)—N-(Polyhydroxy-alkyl)—Arylamines.**

U. S. 2,411,631—**(Ciba)—Stable suprarenal cortical hormone preparations.**

U. S. 2,411,664—**(Ciba)—Amino carbinols.**

U. S. 2,411,897—**(Sterling)—Aqueous acid amino solutions stabilized against formation of precipitates with organic hydrophilic protective celloid, such as starch or gelatin.**



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READERS' QUESTIONS

ENTERIC COATINGS: We take the liberty of troubling you with reference to enteric coatings. In spite of the fact that we have observed the controls recommended in connection with enteric coatings published in the "Journal of Pharmacy" for December 1945, we have found that some patients eliminate the tablets just as they are taken. We should like to know whether you have any controls more suitable or whether you can furnish us more complete literature with regard to this matter, which we know has been greatly discussed. Sometimes we use gum lac for these coatings, and at other times we use Tolu resin; subjecting them in each case to the controls described in the above publication and have obtained satisfactory results in all cases. However, experiments made on living persons have not given the same results. Numerous patients have eliminated the whole tablets. Montevideo.

Listed below are a number of references on the testing of both coated and uncoated tablets. I think that the information contained in these reviews and studies will be useful in helping you to solve your problem. Some of these articles contain additional bibliography which may be worth checking.

Lesser, M. A.: "Enteric Coatings," Drug & Cosmetic Industry, 49:151, Aug. 1941.

Bandelin, F. J.: "The Physical Control and Standardization of Compressed and Coated Tablets." American Journal of Pharmacy, 117:124, April 1945.

Gershberg, S. & Stoll, F. D.: "Apparatus for Tablet Disintegration and for Shaking-Out Extractions," Journal American Pharmaceutical Association, Scientific Edition, 35:284, September, 1946.

Hoyle, H.: "Disintegration of Tablets," Quarterly Journal of Pharmacy and Pharmacology, 19:279, July-Sept., 1946.

Prance, H. P., Stephenson, D., & Taylor, A.: "Disintegration Test for Tablets" Quarterly Journal of Pharmacy and Pharmacology, 19:286, July-Sept. 1946.

TELEPHONE SPRAY: We are interested in a preparation to use in the sterilization and deodorizing of telephone mouth pieces. Can you suggest a formula that we can try out along this line, in liquid or cream form. Any suggestion that you make will be appreciated. Philadelphia.

A spray antiseptic with a pleasant odor for use on mouth pieces of telephones has been suggested by S. P. Jannaway as follows:

Soap, alcoholic tincture	**10 parts**
Alcohol	**5 parts**
Thymol	**1 part**
Pine needle oil	**to suit**
Peppermint oil	**to suit**
Water	**50 parts**

Other antiseptic and odorizing compounds may be used instead of the thymol and essential oils but care should be taken that they are compatible with the other ingredients.

HORMONE CREAM: I am a subscriber to your magazine and I would appreciate it very much if you can offer a good estrogenic hormone cream formula. We have been making such a cream but it is not quite satisfactory. Its consistency is not creamy enough and it is rather hard and does not spread smoothly. New York City.

Preparations of this sort were described in some detail by W. M. Malisoff in the April 1946 issue of "Drug & Cosmetic Industry." From this article I take the following typical formula:

Beeswax	**10.0**
Spermaceti	**3.0**
Cocoa butter	**5.0**
Lanolin	**6.0**
Olive oil	**30.0**
Mineral oil	**30.0**
Borax	**0.5**
Water	**15.0**
Hormone oil	**0.5**

ANESTHETIC PLUCKING CREAM: I have been working to develop a cream which would have an anesthetic effect on the skin to allow the removal or plucking of the hair without pain. We would appreciate highly any formula you may have available. Lawrence.

Perhaps you might try something on the following order. This plucking cream is said to decrease the pain resulting from tweezing hairs around the eyes, face, etc.

Ethylaminobenzoate	**1.0**
Cold cream base	**99.0**

It is recommended that this cream be rubbed in well and left for thirty minutes before plucking the eyebrows.

CUTICLE "REMOVER": Please send me a couple of formulas for a cuticle remover. I want something that doesn't use any alcohol. Chicago.

It should be pointed out that the term "remover" is not particularly apropos since such products do not remove, but merely softens the cuticle thus assisting in its removal or facilitating its being pushed back by the orange stick. Alcohol is not necessarily a component of such preparations. A standard formula for a cuticle softener is a 2 per cent solution of potassium hydroxide in 20 per cent glycerine and water to make 100 per cent. However, if you desire a somewhat more pleasing and more rounded formula I would suggest that you try the following:

Potassium hydroxide	**3.0**
Glycerine	**8.0**
Rose water	**50.0**
Water	**39.0**

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VANISHING TYPE HAND CREAM: We would appreciate it greatly if you would supply us with a formula for a vanishing hand cream. We would also like to know the type perfume to use in this cream.

There is also another problem we have and that is covering the sulphur odor in our hair and scalp creams. What type perfume would you recommend to cover the sour smell which is indicative of a sulphur cream or ointment? The amount of sulphur we use in our cream is three per cent. Long Island City.

A vanishing type hand cream can be prepared from:

Stearic acid	**18.00**
Cetyl alcohol	**2.00**
White odorless cocoa butter	**3.00**
Triethanolamine	**1.50**
Glycerine	**13.00**
Alcohol	**7.00**
Perfume	**0.50**
Methyl parahydroxybenzoate	**0.15**
Water	**54.85**

Melt the first three items. Mix the glycerine, triethanolamine, and water, and heat. Add melted fats. Mixt rapidly until cool. Finally add perfume and preservative dissolved in alcohol.

With regard to your questions concerning perfumes, I would suggest that in both instances you contact perfume houses such as are advertised in our publication.

BLEACHES AND DEPILATORIES: I am interested in formulas that will lighten hair on the face. If you have any such information I would appreciate it if you would forward same to me. I should also like you to send me information or references to sources of information which will inform me of new ingredients used in depilatories. New York.

Most preparations for bleaching facial hair or hair on other parts of the body are based on peroxide. An authority in this field suggests that fine hairs can be bleached with hydrogen peroxide. He recommends the use of concentrated hydrogen peroxide containing five drops of ammonia water per ounce, or the use of an ointment containing hydrogen peroxide. Such an ointment consists of:

Hydrogen peroxide, concentrated	**3.0**
Cholesterinated petrolatum	**30.0**

This ointment is applied at night and removed in the morning. It must not be used near the eyes, as it may then cause conjunctivitis. Should irritation occur, it is better to alternate with cold cream.

With regard to your second question, new work in the field of depilatories has been concerned chiefly with mercaptans. However, most, if not all, such products are covered by patents. If you are interested in the background of these newer compounds, I suggest that you obtain a copy of U. S. Patent 2352524, issued June 27, 1944 to R. L. Evans and E. G. McDonough. A copy is available from the Commissioner of Patents, Washington, D. C., at a cost of 25 cents.

PERFUMING SACHETS: We are making a sachet powder using chalk, cornstarch, talc and perfume, this last being added at the rate of three pounds per hundred pounds of base. This product has been well received but we have had several complaints to the effect that when the bottle is about half used up the balance does not seem to be as strong as when the bottle is first opened. Could this be due to the deterioration of the base, due to the dampness present in bathrooms, to the lack of a preservative, or to some other cause? Cleveland.

As you are probably aware, most perfume containing preparations have a stronger odor when freshly opened. However, in a well formulated product the odor should persist. I do not think that your base is especially at fault, but that the trouble lies in your perfume. What is probably needed is an odorizing compound containing a suitable fixative to help retain the perfume more effectively. I would recommend that you get in touch with your perfume supplier and specify a perfuming compound especially formulated for use in sachet powders.

DEODORANTS: Many people are sensitive to the aluminum salts in commercially available deodorants. Can you suggest a formula for an underarm deodorant that would be available on prescription at the average pharmacist's, without any of the aluminum salts? Would it be possible for you to give me a formula for both a liquid type and a cream type deodorant? Orange.

Quite a number of compounds may replace aluminum salts. Among them may be mentioned methenamine, oxyquinoline sulfate, salicylic acid, formaldehyde and others. I should like to point out, however, that these materials may also cause irritation to sensitive persons. Following is a typical deodorizing cream in which formaldehyde is the chief active ingredient:

Glyceryl monostearate	**15.0**
Titanium oxide	**1.0**
Petrolatum	**3.0**
Beeswax	**2.0**
Formaldehyde (40% sol)	**1.0**
Water	**78.0**

All the ingredients but the formaldehyde are heated together until a smooth white cream is formed. Mixing is carried on constantly. When the mass cools to 45 °C. the formaldehyde is stirred in.

A lotion using formaldehyde can be made from:

Formaldehyde	**2.0**
Tincture of benzoin	**5.0**
Lavander water	**93.0**

This is a simple lotion, highly antiseptic and effective while it lasts. But the formaldehyde is so volatile that it does not last long. This difficulty can be overcome to some extent by the use methenamine as in the following formula:

Methenamine	**3.0**
Eau de cologne	**50.0**
Water	**8.0**

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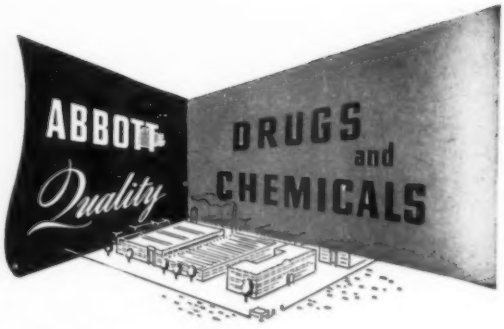

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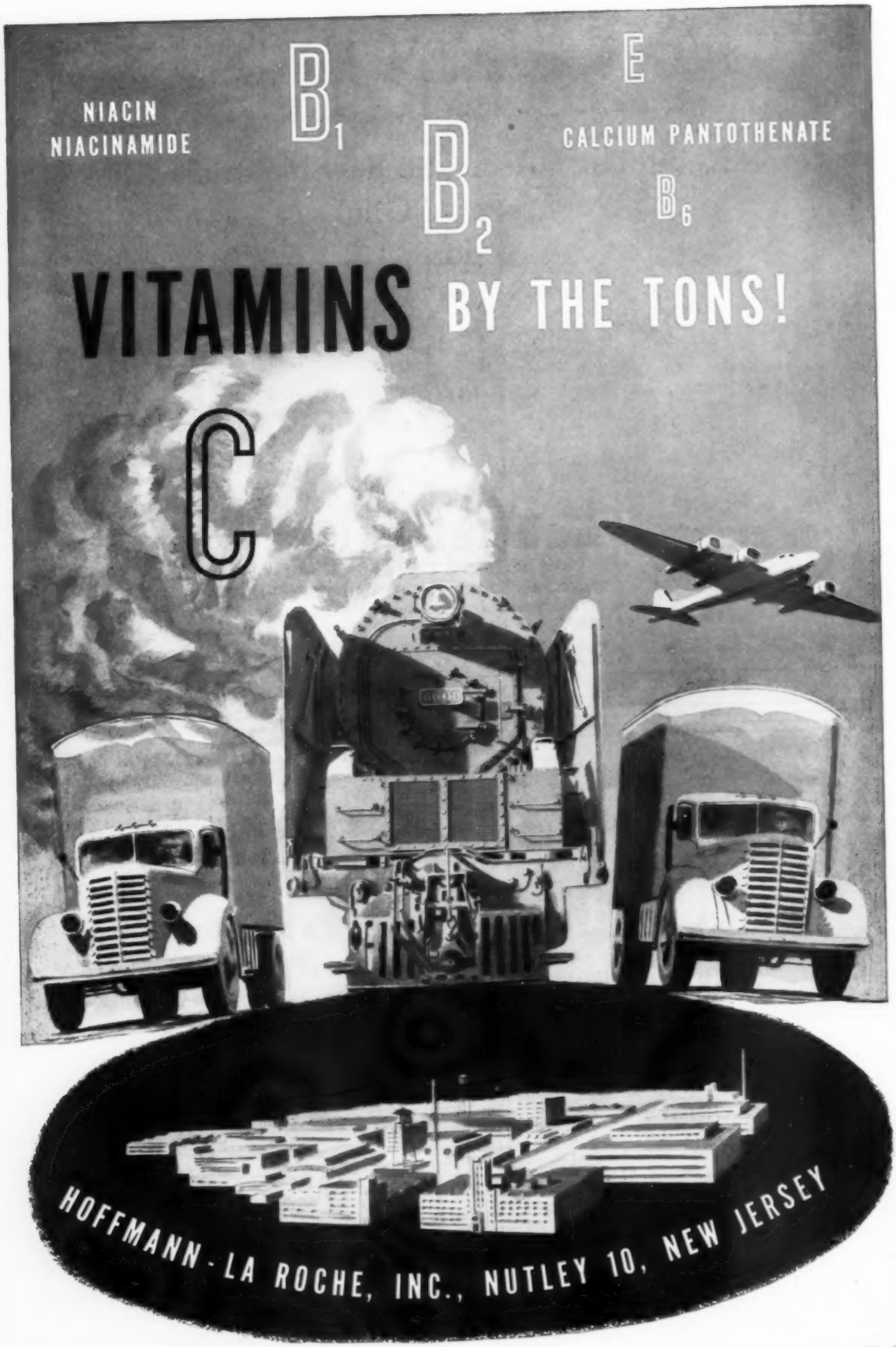
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PURCHASING DEPARTMENT

Alcohol Will Continue Tight in 1947. Molasses for Only Fifty Per Cent of Industrial Needs Available.

Enough molasses will be available during 1947 to manufacture approximately 50 percent of the nation's industrial alcohol requirements, major producers indicated.

Present supplies are extremely tight, they said, with users barely able to squeeze through the remainder of 1946 by drawing on the RFC stockpile reported to be approximately 10,000,000 to 15,000,000 gallons. Some small carryover to 1947 is expected which will meet requirements until initial shipments of new crop Cuban molasses arrive.

By contracts made with the Cuban Government the United States will receive approximately 165,000,000 gallons of blackstrap molasses and 20,000,000 gallons of alcohol from Cuban suppliers during 1947, producers said.

The 20,000,000 gallons will go into the Government stockpile together with any small remainder from the present stockpile.

The deficit in 1947 United States industrial requirements must be made up in domestic alcohol production from other raw materials the most notable being potatoes and corn. Of the two, corn is favored because it is readily available. Currently, however, high prices prevail which have caused reluctance on the part of manufacturers to use it as a raw material.

Manufacturers anticipate early in 1947, lower prices, however, which will place corn in a more favorable position as a raw material.

Alcohol, Penicillin Controls to End

Government regulations limiting deliveries and processing of cane alcohol, allocating penicillin, and allocating stockpiled alcohol to industrial alcohol producers are slated for early retirement, it was learned recently.

The Office of Temporary Controls will revoke Order L-353 to permit unrestricted delivery and processing of imported cane alcohol. This action is made possible as a result of the recent Department of Agriculture action permitting unlimited use of corn by distillers in making beverages.

DECEMBER PRICE CHANGES

UP

Acetylsalicylic Acid 5c
Ammonium iodide 25c
Balsam Tolu 15c
Benzocaine 30c
Benzyl salicylate 10c
Cade oil 5c
Cajuput oil 35c
Calcium gluconate 6c
Candelilla wax 3c
Citronella Ceylon 25c
Java $1.20
Cresol USP 3c
Formaldehyde USP 2c
Geranium oil Bourbon 25c
Ipecac root $1.50
Jalap root 5c
Lavender spike oil 20c
Mace oil Dist. 75c
Magnesium carbonate 3½c
Nutmeg oil 75c
Papain pure powd. 75c
Pennyroyal oil 60c
Rosemary oil 2c
Vetiver oil Java $2.
Zinc Iodide 15c

DOWN

Anethol 10c
Angostura bark 6c
Anisic aldehyde 15c
Beeswax white 3c
Bois de Rose Braz. 5c
Buckthorn bark 7c
Camphor oil white 10c
Cantharides Chinese $1.15
Citronellol 5c
Clove oil 10c
Juniper berry oil 50c
Mastic gum 20c
Menthol Nat. 30c
Mercury $4
Petit grain oil SA 25c
Senega root 10c
Spruce oil 5c

• **Prices quoted in this section were current on the first of this month.**

Revocation of Schedule 118 to M-300 to become effective December 31, 1946, will permit producers of penicillin to sell whatever quantities they choose to whomever they choose without Government restriction.

Fine Chemicals Advanced

Fine chemicals and products processed from coal tar were adjusted to higher price levels. In the former group were bismuth salts (the chloride rose as much as $1.50 per lb.), caffeine alkaloid, citrate and hydrobromide; crude and resublimed iodine; vanillin derived from lignin, following previous advances in the eugenol derived vanillin; all of the glycerosphosphates; amyl acetate; and synthetic camphor. The refined powder of the latter moved up from 69c to 76c, and the tablets from 82c to 94c. No further changes were heard in glycerol in addition to the recent markup from 18c to 55c per lb., but sharply higher quotations for glycerol were reported in the resale market.

In the coal-tar list, phthalic anhydride led with an advance of 1½c per lb., due to the rise in crude naphthalene. New prices range from 14½c to 15½c per lb. Later, price upturns were recorded for a fairly extensive list of intermediates, including USP cresol, dimethylamine, monochlorobenzene, beta-naphthylamine, and a number of acids. Crude coal tar rose ½c per gal., creosote oil 1c per gal., and refined pyridine 10c per lb.

Carnauba Easy

Carnauba wax quotations softened slightly, and reports were current in the market that one of the major U. S. consumers recently unloaded a heavy inventory. New developments in the manufacture of floor waxes have given rise to the feeling that much less carnauba will be required by this concern within the next year.

Saccharin Pinch

With supplies at their lowest point since before the war, no substantial relief for the shortage of saccharin, sweetening agent and substitute for

(Continued on page 121)

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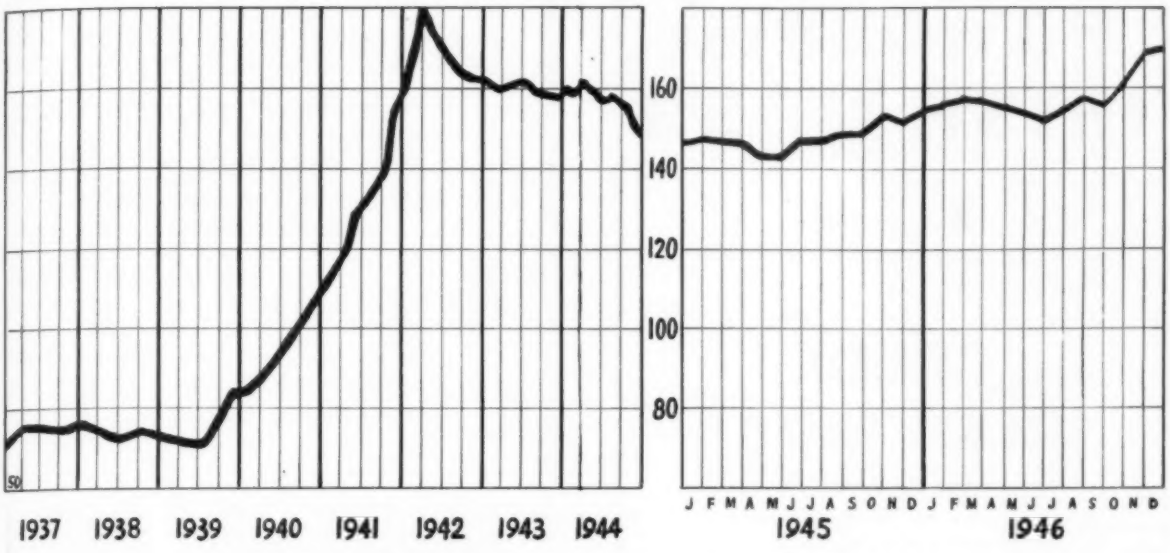
50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for December advanced from 170.1 to 171.4.

Steady Improvement in Essential Oil Supplies Expected in 1947. More Foreign Oils Arrive Here.

Reduction of the present 20 percent Federal excise tax on cosmetics to 10 percent by July 1, either through direct action by Congress or declaration of official termination of the war emergency, is anticipated in the toilet goods industry. Elimination of the entire levy is a possibility, but hopes do not run high on that score.

A cut in the tax to 10 percent would help both consumer and industry in the keen competition which will probably mark 1947, according to trade authorities. Toilet goods will have to share consumer expenditures with many other types of goods now in more plentiful supply and any reduction in taxes paid by the consumer will aid the industry in meeting price resistance and maintaining its market.

So far as supplies are concerned, this year promises to see steady improvement. Foreign oils continued to arrive in gratifying quantities during the latter part of 1946. The aggregate for the first 8 months equaled 5,291,506 pounds, an 11 percent increase in essential oil imports over the like 1945 period.

The one major exception is glass bottles which promise to be in tight supply during much of 1947. Soda ash, the chemical used in glass bottle making is very short, with consequent effect on the available volume of bottles. Restrictions have been removed on molds for finer bottles, but production continues difficult. It is expected, however, that finer bottles will make their appearance after the middle of the year, and will be a more important factor next fall.

Trade spokesmen reported essential oils continue to command very high prices. Many were said to be several times their prewar quotations. Jasmine, basic in the industry, was said to be selling from $1800 to $2000 per pound, against $300 per pound in the pre-war period. On the other hand, synthetic oils have shown comparatively little advance.

Exports of Essential Oils, Reunion

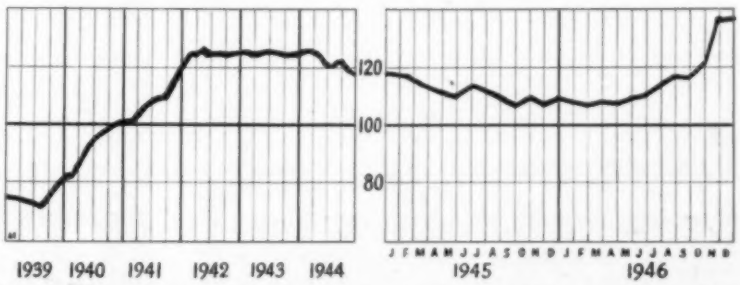
Exports of essential oils from the island of Reunion during the first 6 months of 1946 included 69,900 gross kilograms of geranium oil, of which 39,800 kilograms went to Madagascar, 29,600 kilograms to France, and 500 kilograms to the United States. The total value amounted to 143,987 francs.

Exports of oil of vetiver from Reunion in the first half of 1946 totaled 19,300 kilograms, 93 per cent being shipped to France, and most of the remainder to Madagascar. These exports were valued at 63,710,000 francs. The amount of oil of ilang-ilang exported in the same period was 2,800 kilograms, valued at 3,530,000 francs. France accounted for 75 percent of the quantity exported.

U. S. Imports of Bitter-Almond Oil From French Morocco

The first imports of bitter-almond oil into the United States since 1941 were received in September 1946 from French Morocco. The quantity was exception-

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index was up fractionally from 158.3 to 158.6. Aspirin and bismuth metal were higher. Menthol and mercury declined.

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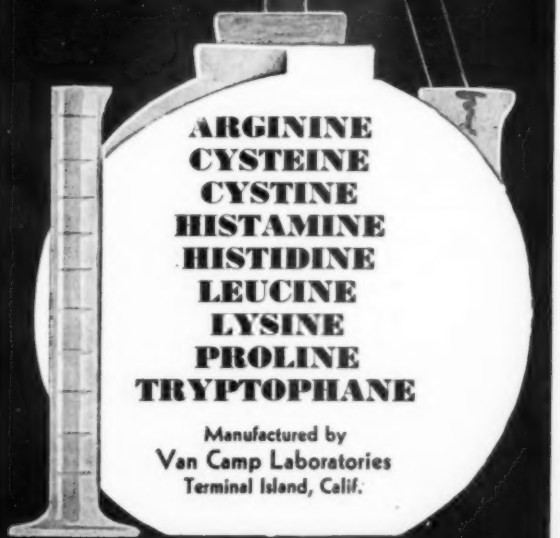

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ally large for this item—about 33,015 pounds. Total imports of the oils in 1940 amounted to only 5,519 pounds, and in 1941, only 1,309 pounds.

Mint Oils 1946 Output Decreased

The Bureau of Agricultural economics of the Department of Agriculture reports the estimated 1946 output of peppermint oil at 1,334,000 pounds compared with the 1945 output of 1,410,000 pounds. Spearmint oil output in 1946 was estimated at 286,000 pounds, compared with 295,000 last year. The number of acres planted for both peppermint and spearmint also decreased in 1946. Details of the report follow:

Peppermint Oil

	Acres planted	
	1946	1945
Indiana	18,000	18,000
Michigan	14,000	15,000
Ohio	*	240
California	600	650
Oregon	9,000	8,000
Washington	4,200	4,400
Total	45,800	46,290

	Oil, pounds	
	1946	1945
Indiana	450,000	504,000
Michigan	266,000	330,000
Ohio	.....	8,000
California	16,000	24,000
Oregon	396,000	328,000
Washington	206,000	216,000
Total	1,334,000	1,410,000

*Not available for publication—only one grower.

Spearmint Oil

	Acres planted	
	1946	1945
Indiana	6,800	6,800
Michigan	2,500	2,200
Total	9,300	9,000

	Oil, pounds	
	1946	1945
Indiana	204,000	218,000
Michigan	82,000	77,000
Total	286,000	295,000

Haiti's Exports of Essential Oils

The value of Haiti's exports of essential oils in the fiscal year 1945-46 was 2,501,138 gourdes, a marked gain from the 1,830,933 gourdes in the preceding year. Exports of oil of vetiver were valued at 1,614,000 gourdes in 1945-46, compared with 465,693 gourdes in 1944-45.

Haiti's exports of other essential oils in 1945-46 were valued as follows, with the 1944-45 figures in parentheses: Lime, 387,425 gourdes (536,693 gourdes); amyris, 212,792 gourdes (284,336 gourdes); lemon-grass, 143,585 gourdes (38,528 gourdes); petitgrain, 84,855 gourdes (58,020 gourdes); citronella, 34,365 gourdes (10,225 gourdes); sweet basis, 23,500 gourdes (25,590 gourdes); neroli, 15 gourdes (412,100 gourdes); grapefruit (shaddock), 601 gourdes (0).

Cultivation of Essential-Oil Plants In The Ukraine, U. S. S. R.

In the Ukraine, the cultivation of essential-oil plants has been resumed, and more than 17,000 hectares were planted to such crops in 1946, reports the Soviet press. This year coriander was once more planted in the Nikolayev oblast. The Kamenets-Podolski oblast had 4,500 hectares under coriander and 1,700 hectares under cumin. In the Chernigov oblast, 300 hectares were devoted to fennel, and mint was grown in the northern Ukraine.

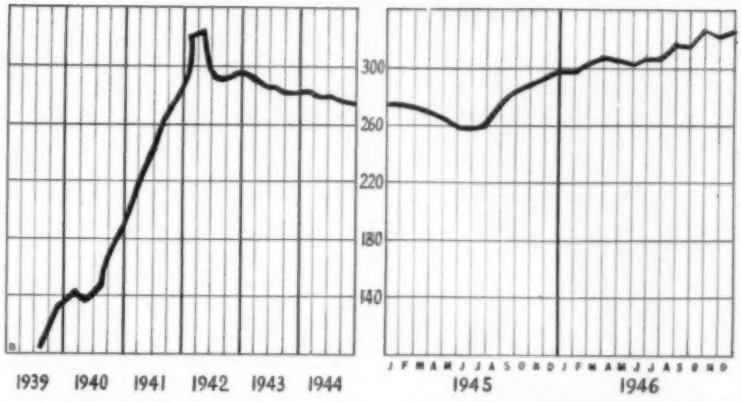
Crimean rose and lavender were planted for the first time on 15 hectares in the Izmailoblast. Also, the systematic collection of wild-growing savory and calamus is under way.

All the essential oil factories in the Ukraine have been restored.

Miscellaneous

Prices on oils nutmeg and mace are sharply higher covering the limited amounts that are obtainable for spot delivery. It is quite possible anise and cassia oils will continue to work toward lower levels. The supply of West Indian Bay oil has become tighter. The abnormally high prices prevailing on oil spearmint reflect the tight supply position in the country. The downward trend in anethol continued. Stocks are in an improved position.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced to 341.1 from the previous 338.2. Balsam Tolu rose to $4.50; ipecac was sharply higher at $6.

Saccharin Pinch

(*Continued from page 117*)

sugar, is forseen by manufacturers and dealers in less than six months.

Stocks of domestically produced saccharin are nonexistent, a survey indicated, and principal producers are plagued with a backlog of orders which cannot be filled. There is no saccharin to be had at resale and dealers refuse to handle "catch-as-catch-can" stocks at skyhigh prices.

There is some saccharin available, however, which was recently imported from European countries. Prices for these stocks of foreign produced saccharin range from $15 to $30 in what was termed a "black and blue" market. These prices are in ridiculous contrast to the old ceiling price of $1.65 per pound and the present domestic price range of from $1.80 to $2 per pound, manufacturers said.

The factors behind the shortage were said to be threefold: (1) vaulting of demand as a result of the worldwide sugar shortage; (2) a strike in the plant of the major domestic porducer which lasted from June until mid-October and cleaned out all existing dealers' stocks; (3) production during the greater part of 1946 was almost impossible because the OPA ceiling price of $1.65 per pound did not allow an adequate profit margin.

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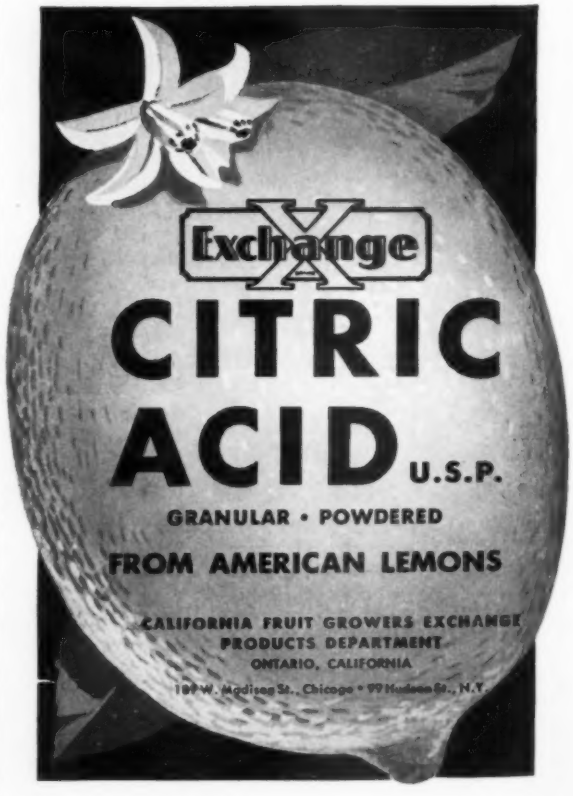


The shortage has been further aggravated by the nationwide coal strike because saccharin raw materials are coal tar derivatives, manufacturers said.

The shortage has also stimulated European interests in developing other sweetening agents which might serve as substitutes for both sugar and saccharin. A new benzene derivative, 4,000 times sweeter than sugar, synthesized by a Dutch chemist, Prof. Pieter Eduard Verkade, is now manufactured by Polak & Schwarz of Zaandem, Holland, and according to reports, will be imported into this country.

Cod Liver Oil Firm

While a fair amount of cod liver oil is reported available in Norway, shipments are being held up due to a shortage of containers and the local market is therefore in a firm position. Up to the present time local suppliers have been able to meet deliveries fairly promptly to domestic consumers, but in the face of delayed shipments from Norway they are unable to entertain export inquiries for any sizable amounts.

Until the vegetable oil picture changes, little improvement in the supply position can be expected. Vast quantities of cod liver oil are urgently needed in Europe, with a good portion of the oil finding its way into industrial channels for soaps, a substitute for paint oils, etc.

Alkali Users Face Shortage

Intensification of the shortage of caustic soda and chlorine for the production of paper, plastics, solvents, insecticides, dyes, pharmaceuticals and other manufacturers through the loss to alkali producers of chlorine tank cars for shipment loomed on the horizon.

Negotiations between the War Department and Colorado Fuel & Iron and Diamond Alkali for the leasing of the Denver, Colorado, and Pine Bluff, Ark., chlorine-caustic soda plant which drew to a close recently, provide that 16 chlorine tank cars will be withdrawn by the Army from the present lessees, Pittsburgh Plate, Stauffer Chemical and other lessees of Army tank cars for use at the Denver and Pine Bluff plants.

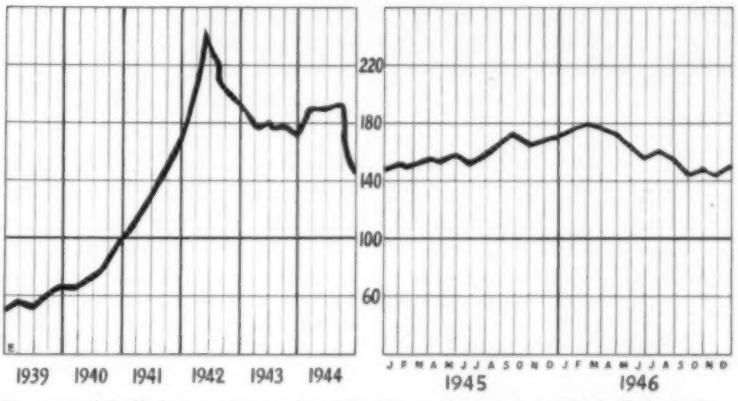
In view of the general tight supply of caustic soda and chlorine it is likely that consumers cut back by their normal suppliers because of the loss of tank cars, will be unable to obtain replacement.

Mercury Down

Although the spot market for mercury dropped to $88 per flask a reversal in the trend is now generally anticipated. On the basis of latest prices quoted on mercury of Italian or Spanish origin in the world market, this metal should shortly be selling here at a minimum of $100 a flask, duty paid, in contrast to current quotations in the local market ranging from $88 to $93 per flask. Domestic producers, it is felt, will undoubtedly take advantage of the improvement in world prices especially in the light of a series of declines that have taken place in this article since V-J Day.

Potentially, the greatest use for mercury is in the generation of power, but the use of this metal in dry cell batteries and the recent development of a mercury clutch for various types of household appliances promise increasing outlets for the metal. The chemical industry accounts for a good percentage of the mercury used in this country. Cheap offerings from Italy at below $65 per flask, f.o.b. have virtually all disappeared. As soon as low cost imported metal is consumed domestic prices will, it is believed, move up more in line with the shipping prices of $80 per flask now quoted in the world market, the latter figure being f.o.b. Spanish or Italian ports. With shipping prices at $80 the metal should be selling at $100 or better duty paid.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index advanced to 143.6 from the previous 141.1. Bois de Rose and clove oil dropped slightly; citronella Ceylon jumped to $2.10.

Menthol Down

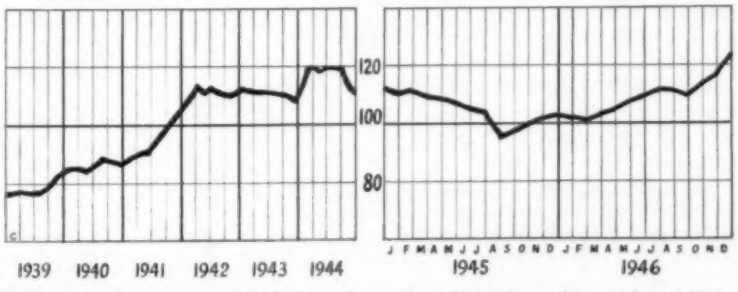
A further reduction is noted in the menthol market with comparatively little demand being reported and spot supplies in dealers' hands being estimated at between 30 to 50 tons, the largest since the war.

Brazil is reported to be rather anxious to sell goods but in view of recent exchange developments in China, prices from there are reported as firm.

Production of menthol in Japan is believed to be possible out of the Sambi crop of peppermint (mentha arvensis) or the Hokkaido crop should be ready about this time, thus it is believed increasing amounts of menthol will be available in the months ahead.

A leading menthol producer in Japan, Kobayashi, reports that its plant, which had been destroyed during the war, has been reconstructed and that it has been possible to resume production.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index advanced to 125.2 from the previous 117.8. Balsam Tolu and candelilla wax were up; menthol was lower.

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The National Formulary Eighth Edition, Prepared by the Committee on National Formulary, Under the Supervision of the Council, by Authority of the American Pharmaceutical Association, 888 pages, American Pharmaceutical Association, Washington, $7.50.

This edition, the eighth since 1888, provides official specifications for many widely used drugs not previously included in either the U. S. Pharmacopoeia or the National Formulary. Among 188 new admissions are such drugs and preparations as Acetarsone, Alcohol Rubbing Compound, Aminoacetic Acid Elixir, Calcium Levulinate, Colloidal Silver Iodide, Ephedrine Sulfate and Phenobarbital Capsules, Ferrous Sulfate Syrup, Isopropyl Alcohol Rubbing Compound, Gentian Violet Jelly, Pentobarbital Elixir, Propylene Glycol, Sippy Powders, Stibophen and sun protective ointment. In addition, formulas and standards are continued in the new National Formulary for many U.S.P. XII drugs not admitted to U.S.P. XIII of which Antipyrine, Bismuth Subnitrate, camphor Spirit, Ergot and Ergot preparations, Ferrous Carbonate Pills, Reduced Iron, Mercury Bichloride, Nux Vomica, Phenyl Salicylate, and Turpentine Oil are a few examples. The Eighth Edition of the National Formulary represents the culmination of four years of planning and work by the members of the Committee on National Formulary, the staff of the American Pharmaceutical Association Laboratory, and hundreds of collaborators. The needs of practicing pharmacists is well met by this new edition.

Les Travaux Recents d'Analyse et de Synthese Organiques et la Chimie des Parfums de 1935 a 1938 (Recent works of organic analysis and synthesis and the chemistry of perfumes from 1935 to 1938), by Hermine and Sebastien Sabetay, 821 pp., Gauthier-Villars, Paris 1941, 500 fr.

This book, representing an unusually complete literature survey of organic chemical investigations during the period 1935 to 1938, covers not only actual perfume materials, but also all chemical investigations that might assist the perfume chemist in the elaboration of new substances. The bibliography comprises 5006 entries, with some of the 1938 references being withheld for a future edition.

The material is so well arranged that the omission of an index, which would ordinarily greatly reduce the value of a compilation of this nature, is of secondary importance. Early parts of the work are devoted to perfume materials. The first section, "Major works of analysis and synthesis," includes among others, jasmone and its derivatives; natural coumarins; the chemistry of substances with a violet odor; the chemistry of substances with a musk odor, etc.

The second section covers natural perfume materials, namely, essential oils, products of extraction and enfleurage, concretes, absolutes, balsams, gums, resins, drugs, waxes, and perfumes of animal origin. A short section covers cosmetic literature.

Much of the book is devoted to "synthetic perfumes," but this is actually a survey of general organic chemistry, systematically arranged. Subdivisions in this section are hydrocarbons, halogen and organometallic derivatives, alcohols, phenols, ethers and epoxides, acids, esters, lactones, aldehydes, ketones, acetals and ketals, furanes and pyranes, nitrogen derivatives, sulfur, selenium and arsenic derivatives. Final sections cover new techniques (laboratory and plant methods) and analytical methods, physical and chemical.

It is possible, by consulting any desired section, to obtain a most comprehensive view of the work done during the period covered, which makes the work a valuable organic chemical reference text.

The Subtle Sense, by Ralph Bienfang, Ph.D., Professor of Pharmacy, University of Oklahoma, 157 pp., University of Oklahoma Press, Norman, $2.

In this little book the sense of smell is treated from every angle—from its physiology to its practical aspects in business, from the use of perfumes to the identification of poison gases. Here are all the known facts, together with many amusing aides by the author, including directions for the complete enjoyment of an ice cream cone. Considerable material here of interest to the perfumer

The Human Face, by John Brophy, 250 pp., Illus., Prentice-Hall, Inc., New York, $3.50.

Here are the features of the face themselves, and their proportion to the whole; here are fashions in faces, from ancient Egypt to yesterday; famous faces, some known, others, like Helen of Troy and Shakespeare, a subject for speculation; and types of faces, with deductions to be drawn, or avoided, about them. Literature, history, art and science are culled to bring the face into four-dimensional focus, and Mr. Brophy also calls upon his rich memory of living faces he has seen, since for years it has been his preoccupation to study faces. Alexander Woollcott, Hugh Walpole, Lawrence of Arabia, and others whose names are more famous than their faces; theatre folk, whose expressive faces naturally have a fascination for the student of the subject; and faces known to everyone: F.D.R., Winston Churchill, Greta Garbo, Hitler, pass by in review.

How To Organize And Manage A Small Business, by Nelms Black, 367 pp., University of Oklahoma Press, Norman, $3.00.

In this book Mr. Black starts with the reader as a candidate for small business and takes him point by point through the problems, planning, decision, and action of small-business organization and management, equipping him with modern management methods and techniques of forecasting and preventing mistakes before they are made by explaining the use of business ratio and percentage guides. It gives concrete advise on how much capital is required for various types of business and tells how to go about obtaining the capital at lowest interest rates and with the best safeguards. It tells not only how to run a business, but the reasons for each particular step taken, so that you learn from the start to think along lines that lead to success in your business, regardless of its nature.

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How Far and How Fast

(Continued from page 41)

and controlled by a careful, continuing appraisal of the cooperation and sales help extended by the leading merchants.

In any community of any importance, you have a variety of retailers selling cosmetics. You will have department stores, independent drug stores, chain drug stores, perhaps a speciality store or some other kind of retailer. A few of these stores, perhaps one or two, are the recognized retailer leaders of the community—recognized alike by both the public and by other retailers. A few more, perhaps twice as many stores are good, reputable, alert merchants. The rest are by and large also-rans. That's a generalization, but it shapes up pretty truly for any community. First you have the creative merchants, few in number, who make the best use of your advertising and promotions, whose own name adds local prestige to any manufacturer, whose ability to sell the community and their own large traffic gives the manufacturer an expanding market. Next you have the stores, owned by good merchants, but not leaders, stores that offer good dispaly, intelligent selling, an excellent reputation with their clientele. And then the stores living on the sale of staples and mass advertised products, stores incapable, because they lack any cosmetic reputation or sales ability or energy, of making a new customer for a manufacturer; capable only of intercepting a sale, because of location, already made by a leading retailer.

There you have a cross-section of distribution.

If you were introducing a new cosmetic and could open in that community with the retailer leader, you would acquire a backer whose prestige and indorsement would have great value to your new line. You would find that this store would make effective use of your advertisements and promotions. If you could secure the real favor of that store, you would find that you had a favorable introduction to a large part of the cosmetic conscious people of the community—the leaders whose own style preference is so important in building community interest in a new product. And then you would soon find that other retailers, particularly the alert ones, were interested in your new line.

As your business grew in this store and this community, you would want and be entitled to seek other retail outlets. Nor would this leading retailer deny this right as your business expanded. Assuming that you intend to continue a policy of selective distribution, that you have decided on this type of personality for your company, rather than seeking a persoanality in the mass distribution field, you would find that your primary consideration in adding new stores is to do this in a way that would lose for you neither the distribution nor the cooperative favor of this leading retailer. Obviously, you cannot sacrifice either the influence of this store in exciting the interest of other retailers or the influence of this store in guiding public opinion.

Your customer, this leading retailer, will view your

expanding distribution in his community, both from the view-point of store policy and from the view-point of department profits. He will be interested in knowing whether you are selling the kind of stores and the number of stores that will make your product of declining interest to his clientele—lets say, for simplification, whether you are taking a class prestige product and making it commonplace. He will also be interested in knowing whether you are using his store prestige, his energy and his ability to create new customers, to open many neighborhood stores with no ability to sell a product of this kind, but who are often able, because of neighborhood location, to intercept the repeat sale that is the stimulus of a leading store to more energetic selling.

That is the store policy you would be up against—a decided disinclination to use his prestige and sales ability, only to find the fruits of repeat business dissipated among a hundred neighborhood locations, and an even more potent policy, that the character or personality of the store may well make it out of character to feature or even stock a product that may become commonplace by being everywhere available.

Now let's look at this customer's view-point on department profits. You originally interested this store because you had an excellent product, an appealing package, a sound price and a sensible advertising and promotion plan. He was able to give floor space and sales help, and to make money on this new line because, for a period, he had an exclusive franchise. Let's say that you are now doing $2,000 a year in this store, a profitable and desirable account for a store of this size. As a business man, he is willing to concede that you are now entitled to add a few new retailers, that these new retailers, if they are good merchants, will expand the total business, may even aid in expanding his own business because an increase in retail promotions and an increase in contact and confidence of the consumer will bring him his large share of community business.

But he knows that this expanding business from the consumer takes time, that if you rush right into too many stores at once, you will bring a dilution of consumer purchases among too many stores. This may well cut his $2,000 volume, may well make it less desirable to give you any cooperation. This question of dilution of consumer buying is one of the critical things in selective distribution. In any community you may expect just so much business, big or little, according to your product, advertising, economic conditions and other factors. You want and must have in selective distribution the favor and cooperation of the capable retailers. How far may you dilute expected consumer interest in your product? Certainly not below the point where your advertising and retail promotion fail to develop enough business for any one store to make it a worthwhile account.

If you want to succeed in selective distribution, if you want to maintain your price range, your package, the personality of your business, you must have a clear understanding of the store policy, of your retail customers and a clear understanding that over a period, store

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cooperation goes hand in hand with department profits.

With this understanding, you would expand your distribution in this community with the greatest care. You would select a new retail customer, not only because he is a good competent retailer of cosmetics, but because his store is attracting your type of clientele, and has a store personality that does not clash either with the personality of your company and product or with the personality of other leading retail customers whose favor you wish to retain. And, also, you would control your rate of expansion so that you would never dilute the business that a capable energetic customer can secure below the point where your business, your account is interesting to him.

How far you expand, depends of course on many factors—the price and character of your product, the amount of advertising money you are spending, the nature of your competition and so on. If you have a prestige, high-priced product like a perfume, it may be necessary to confine your distribution to the retail leader, or after full development of the business, to the two or three leading stores. This is because, only in these stores in the community, can you build the identity or personality that a fashion product of this kind requires. Not only must you retain this identity, but you must have the full cooperation of these stores which to a large extent are the only ones capable of sustaining a considerable consumer interest in such a product.

Or, you may have a product in the dollar to five dollar range, capable of sustaining eventually a large advertising program, a class product, but not an exclusive, prestige, fashion product. Here you have before you the full field of selective distribution—those competent cosmetic retailers—department store, independent druggist and chain store. How *fast* you progress in this distribution depends as we have seen, on the degree of dilution of consumers' purchases that you can afford and still hold a secure place among your customers; how *far* you progress in the number of stores you sell, depends in the last analysis, on the degree of cooperation you want or need from the stores at the top.

There is nothing in business surer than that a successful product in distribution, like water, seeks its own level. When by advertising, by selling or because of a period of exciting popularity and momentum, you let that product flow beyond the distribution capable of contributing something to its sale, when you extend its distribution to a point where identity and personality must begin to change to a new and different personality, then you are in fact faced with a decision to retreat or to build an utterly new and different kind of business. Cosmetic history shows no alternative.

Emulsion Technology

(*Continued from page 51*)

Small quantities of an oil-soluble water-soluble micronized dye are dusted into the emulsion, using a finely drawn capillary for the operation. If there are notice-

able patches of color in the emulsion, the presence of oil in the continuous phase is indicated, denoting instability. By using a water-soluble, oil-insoluble dye, the same procedure may be applied to water-in-oil emulsions.

Conclusion:

The emulsion technician cannot rely solely on theoretical considerations to guide him in his work, although familiarity with the literature is of primary importance. A grasp of those concepts which, in the light of experience, show evidence of practical value is essential. However, the emulsion chemist has the burden of himself applying these principles to each individual problem as it arises.

New raw materials should be evaluated not only as to their applicability to present formulations, but also for future reference. The application of emulsions is growing steadily and expanding rapidly into new fields. With this expansion, the knowledge of emulsion technique becomes more and more specialized and the need for keeping abreast of developments is greatly increased. Perhaps as a result of its great growth, emulsion chemistry will eventually become a branch separate and distinct from other colloid studies and the industrial and academic aspects correlated into a new science.

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Evan P. Helfaer

(*Continued from page 47*)

A significant clue to Helfaer's management ability is his far-sighted employees' program. One of the many advantages offered Lakeside employees is a profit-sharing and retirement plan which is very generous. This plan provides that within 60 days of the close of each fiscal year the company will contribute a cash payment to the employees' profit sharing and retirement plan trust fund representing a substantial per cent of its net profit for the year. Through this contribution the company is able to return as much as 50% of its net earnings to its employees. Each eligible employee's annual share of the contribution may equal 15% of his annual salary. The trust fund forming a part of the profit-sharing plan is administered by the trustees who are employees and officers of the company. The trustees have full authority to administer the plan and to invest the contributions made by the company into the trust fund.

In addition, a very thoughtful and generous hospital and life insurance program is underwritten by Lakeside Laboratories. Of particular interest is the inclusion for hospital benefits of all dependents of employees up to 18 years of age. Maternity benefits are also included in the program.

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to emphasize that the road ahead will not be easy. But when he thinks back to the days of his twenty-five dollar a month attic room he smiles with the confidence of a man who knows his company has learned well the reasons for success.

Newer Insect Repellents

(*Continued from page 46*)

Improvements over these simple liquid mixtures are claimed by Dregling,[18] whose patent describes insect repellent compositions of jelly-like consistency. An illustrative example of such compositions, one of five given in the patent, is as follows:

Ethyl cellulose	**2.7 per cent**
Cellulose acetobutyrate	**2.3 " "**
Propylene glycol monostearate	**2.0 " "**
Dimethyl phthalate	**55.8 " "**
Rutgers 612	**18.6 " "**
Indalone	**18.6 " "**

Aside from such advantages as ease of application, reduction of greasy feel, avoidance of waste, greater stability, removal by washing with soap and water, and suitability for packaging in collapsible tubes, it is claimed that these gel-like preparations extend the repellent activity to more than double that of the conventional liquid type products.

As already mentioned, during the last years of the war the Navy was doing some work of its own, chiefly at the Naval Medical Research Institute (NMRI), at Bethesda, Maryland.[6, 19, 20] At first interest was focused on a repellent mixture called NMRI-201 consisting of 70 per cent 2-phenyl cyclohexanol and 30 per cent beta-tetralol, by volume. Although an efficient repellent, the composition was found to cause primary irritation to the skin in 6 of 59 subjects.

In view of these findings, it was obvious that a substitute for the tetralol was necessary. There was finally developed a composition called NMRI-448, or just "448," made of 70 per cent 2-phenyl cyclohexanol and 30 per cent 2-cyclohexyl cyclohexanol. Singularly enough, both of these chemicals are listed among the insect repellents described in a patent granted to Jones and Travis[21] of the Orlando group.

Toxicological tests with NMRI-448, though incomplete, indicate that this repellent will be acceptable.[6] In one series of tests, "448" rated a grade of 8 with regard to skin sensitization; the passing grade being 7 or less. However, in other studies human subjects applied the repellent to their arms twice daily for a period of three months without any reaction being produced. Feeding tests on mice given 15 mg. daily showed no ill effects after three months.[20]

An efficient insectifuge, field tests in the tropics with NMRI-448 showed that it offered protection against various insect species for periods ranging from 5 to 10 hours. A clear, moderately viscous, nongreasy liquid, "448" may be used full strength. However, since the repellent tends to solidify at about 74° F. (20° to 28° C.)

rendering it unsuited for temperate zones, alcohol is added to lower the crystallization point. It was found that a solution of ethylalcohol containing 80 to 85 per cent NMRI-448 yields a protection period of 310 to 340 minutes and that the crystallization temperature falls to 4° to 3° C., making the repellent suitable for practically all environmental conditions in which biting insects may be found.

Investigations on NMRI-448 were still unfinished at the end of the war, and without the pressure of necessity the research bogged down. Since then, a patent application, based on a synergisim claim, has been assigned to the Chemical Foundation, Inc., New York. This organization is licensing various companies to market "448" under this pending patent. The formula being recommended by the Foundation consists of:

NMRI -448	**60.0 per cent**
Alcohol	**38.0 " "**
Water	**2.0 " "**

However, it is reported[20] that limited field tests show that mixtures containing this proportion of "448" are only about 40 to 50 per cent as long lasting against New Jersey salt marsh mosquitoes and about 80 per cent as long lasting against the yellow fever mosquito as is Rutgers 612.

Of related interest from the chemical viewpoint is Wasum's[22] patent based on the use of certain esters of cyclohexanol and related compounds as insect repellents. Useful in alcoholic or oily vehicles, these chemicals may also be incorporated in creams, as in the following example:

Cyclohexyl 2-ethyl hexoate	**25.00 parts**
Stearic acid	**20.00 "**
Potassium hydroxide	**0.67 "**
Water	**54.33 "**

Many other insect repelling chemicals have been developed by both Government and industrial workers. Among the first of the modern compounds to attract attention were the several glycols described in Granett's[23] patents. In addition to the compounds already mentioned, workers at the Orlando Laboratory have developed and studied a number of insectifugal chemicals, some of which have been patented. One of these patents[24] describes the use of methoxy, ethoxy and propoxy benzyl alcohols as insect repellents. Another[25] covers the use of various organic acids such as undecylenic acid, 2-ethyl-n-caproic acid, pelargonic acid and cyclohexanecarboxylic acid. Isopropyl cinnamate, used alone or in solution in mineral oil, olive oil or alcohol, has also been employed in insect repellents patented by these workers.[26] In this connection, it should be mentioned that a German patent[27] specifies the use of insectifuges containing cinnamic alcohol or its derivatives dissolved or dispersed in aromatic or hydroaromatic sulfonates.

Other insect repelling chemicals have been described in various technical and patent sources. Ralston and Barrett,[28] for example, employ decyl, dodecyl and

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similar alcohols, as well as lauronitrile and related compounds. The Russians, who have done quite a bit of work of their own on insect repellents, especially those for combatting mosquitoes, have stressed the usefulness of anabasine sulfate. In one of their reports,[29] it is stated that the application of a 5 per cent aqueous solution of anabasine sulfate to the skin affords protection against mosquito bites for ten hours. Toxicological and other studies indicate that the external use of such a solution is harmless.

In the meantime, a large number of chemicals are being evaluated for their usefulness as insectifuges and some of them already show considerable promise.[10] Another series of compounds has recently been synthesized at the Ohio State University.[30] These are awaiting further study as possible insect repellents.

With so much interest being focused on insectifuges, and with so many compounds being developed and studied, there can be little doubt that products meeting or even exceeding the ideal will be forthcoming. Now that the immediate pressure of war needs are removed, cosmetically superior products will be made available. In all probability, as suggested by Richardson,[14] cosmetics providing insect repelling action will also be made to afford other beneficial effects, such as sunscreening. Such combined-action products should make very attractive sales items. As things stand, the general public is already receiving the benefits of better, more efficient and more pleasant insect repellents developed as a result of war-time and post-war research.

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No Reciprocity Wanted in Aromatics

(Continued from page 49)

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Verley Chemical Co., Inc., Belleville, N. J.
Verona Chemical Co., Newark, N. J.

Does the F.T.C. Control Drugs?

(*Continued from page 39*)

in a similar complaint is the Miles Medicine Company, an organization with many times the assets of the Capaudone Chemical Company, and therefore financially able to stand the gaff.

To show how the Commission works to break down a defendant in such a case we merely point out that after testimony had been taken at points throughout the country involving travelling of 61,606 miles, the Commission, apparently because the trial Examiner of the Commission in charge of the cases was changed somewhere along the line, decided it was necessary to retake the testimony of three witnesses, one located at Sumter, North Carolina, one at Birmingham, Alabama, and the third at Tuscaloosa, Alabama. The additional mileage involved in retaking the testimony of these three witnesses is approximately 9,142 miles from Marion, Georgia (home of Capaudine), or 14,554 miles computed from New York (home office of the attorney) Elkhart, Indiana, (home of Miles), and Washington, D. C., the starting point for various personnel. This additional mileage gives a total of 70,748 miles computed from Marion, or 76,160 miles computed from New York, Elkhart, and Washington, a distance equal to three times around the world at the equator. And as Captain Henry used to say, "This is only the beginning." For there is no assurance that the Commission will not order more hearings, or will not again change the trial Examiner with the result that the next examiner might want to retake some or all of the testimony over again. Then when the Government finally finishes its case, if it ever does, the defendant must go to work.

Interesting is the fact that the testimony to be retaken at Tuscaloosa, Alabama, was that of Dr. J. S. Tarwater, an assistant physician at the Bryce Hospital,

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the Alabama State insane asylum, and that to be retaken at Birmingham, Alabama, was that of Dr. Frank A. Kay, also an assistant physician at the same institution. Originally the testimony of these two men was taken to Tuscaloosa and covered 137 typewritten pages. But this was stricken from the record by the new examiner, and—to make it still a little more difficult—the two men were to be reexamined at two different places.

Another interesting fact pointed out in the brief comes from the request that the Commission consider the interest and bias of some of its witnesses. All of them, according to the brief, testified for the Commission on the same subject matter (apparently pertaining to headache relief) five times: in the cases of Emerson Drug Company, BC Remedy Company, Stanback Company, Miles Laboratories, and Capaudine Chemical Company. The repetition of the testimony in the Capaudine case constitutes their sixth appearance, and repetition of their testimony in the Miles case, their seventh appearance. After rehearsing their acts so these witnesses must be able to spout out the information parrot fashion.

A fact that makes the whole situation so fantastic, with reference to BC Headache Powders and Stanback Headache Powders, is that these two companies and Emerson Drug Company, manufacturers of Bromo-Seltzer, went through the mill with the Food and Drug Administration some five years or so ago. These three companies reduced the amounts of bromide and acetanilid in their preparations and labeled them to instruct that no more than two doses be taken in any twenty-four hours. This proved entirely satisfactory to the FDA at that time and even at the present time the FDA finds no violation. However, the FTC has forced two of these companies completely to change their formulas and they are apparently hard on the trail of Bromo-Seltzer, which company thus far is able to, and decided to bear the expense necessary to see the matter through to a final conclusion.

But sooner or later there must be a showdown on the question of whether the Federal Trade Commission can usurp powers definitely delegated by Congress to other specific Government agencies. If the FTC is to assume control over the formulation, and methods of distribution of drug products as well as over the advertising of these products, why do we need a Food and Drug Administration? Certainly the extremely resourceful Dr. Durrett should be able to think up ways and means of controlling the standards and labeling of ethical preparations as well as of proprietary preparations. Perhaps he will soon be the real power behind the writing of the U. S. P. as he was when he was Chief of Drug Control in the FDA. And anybody who thinks we are laying it on a little too thick just does not know Dr. Durrett and his capabilities. Maybe the Commission will wake up to what this man is doing when it is too late and a law restricting the power of the Commission has gone too far to stop.

READERS' QUESTIONS

HAND CREAM AND LOTION: I am interested in a liquid hand lotion and also a hand cream to relieve a chapped feeling. I prefer to use a water soluble type of preparation made from either the polyethylene glycols or "carbowax" compounds. Jersey City.

The information that you want appears in the publication " 'Carbowax' Compounds and Polyethylene Glycols," put out by Carbide and Carbon Chemicals Corp., 30 E. 42 St., New York 17, N. Y. From this book I take the following formula for a hand cream:

"Carbowax" compound 1500	**15.00**
Propylene glycol	**9.00**
Triethanolamine	**1.00**
Stearic acid	**12.50**
Potassium hydroxide 85%	**0.50**
Lanolin	**3.25**
Water	**59.00**
Terpineol	**0.05**
Perfume	**0.20**

A hand lotion can be made from:

"Carbowax" compound 1500	**5.00**
Propylene glycol	**3.33**
"Carbitol"	**5.00**
Triethanolamine	**0.17**
Stearic acid	**3.00**
Potassium hydroxide 85%	**0.08**
Lanolin	**1.00**
Sodium alginate (2%)	**1.66**
Water	**79.00**
Terpineol	**0.30**
Perfume	**as desired**

CRUDE COAL TAR PAINT: Some time ago I saw a formula for a crude coal tar paint but I cannot remember which publication carried it. I think perhaps it was "Drug & Cosmetic Industry." Can you give me the formula? Brooklyn.

As far as I know, the crude coal tar paint formula was not given in our publication. However, what you have in mind is probably the following combination, the ingredients of which are thoroughly mixed:

Acetone	**4 parts**
Flexible collodion	**4 "**
Crude coal tar, to make	**30 "**

PERMANENT WAVE SOLUTION: I would like to know if you could give me a formula for a machine permanent wave solution? Brunswick.

A standard ammonia type permanent wave solution can be made from:

Ammonium hydrozide (28 per cent)	**20.0**
Borax	**5.0**
Water	**75.0**

KOMMON/ SCENTS!

With the National Association of Manufacturers embracing a program of Liberalism (according to the *New York Times*), pretty soon there'll be nobody left to holler: "Communist."

•

Those Roosevelt-lovers!

•

How FDR would have chuckled at his newest "supporters." They used to consider themselves a thorn in his side. Actually, they were painful in a more localized spot.

•

Roosevelt always brings up the word "visionary." You know what a visionary is, of course. A guy who really believes something as small as an atom could do something as big as win a war.

•

Science is finally coming into its own. Like sex, it's here to stay.

•

In our own industry, thanks to enlightening advertising, Milady now knows all about the chemistry involved in her lipstick and perfume. One fashionable friend, who ordered only well-known brands, now orders toiletries as "100 Proof," etc.

•

And the electronic determination of lipstick colors is little less than sensational. Without it we would undoubtedly be faced by lovely women who wore green lip makeup and purple face powder!

•

This is not to belittle science in advertising. Everything has its value. According to a brain surgeon-friend nothing relieves a certain cranial pressure more effectively than a hole in the head. Hypothesis: Some scientific advertising is as necessary as a hole in the head.

•

Next to science for the layman, we like Business Questionnaires best. They're equally informative. Consider the two perfumers who met on the street this week.

Mr. X asked: "How's business?"

Mr. Z replied: "Sensational. Terrific. Marvelous. . . but next week it should pick up!

(This story was originally told about two movie producers . . . So, what?)

•

Only yesterday, the industry's big problem was "bottlenecks." Today: Bottles.

George Fiedler

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COMPOUNDER'S CORNER

(*Continued from page 101*)

Carnauba Wax Cerate

For some purposes, says J. G. Hopkins (*J. Investig. Dermatol.* 7:171, 1946), it is desirable to have a base which adheres well to the skin, hardens its surface and adds to its water repellency. A carnauba wax cerate is well suited to such purposes; carnauba wax being harder and more resistant than beeswax from which the U.S.P. cerate is made. The following formula makes a firm wax, which spreads easily over warm skin and adheres well.

Carnauba wax	**11.0 Gm.**
Ceresin	**1.6 "**
Liquid petrolatum	**87.4 "**

Melt over a free flame, add the active ingredients and cool rapidly in an icebox to glaze. If desired, peanut or other vegetable oil may replace the liquid petrolatum.

Extensively tested on a large number of cases, such cerates may be used as vehicles for active ingredients soluble in oil or oil solvents, such as salicylic acid, chlorophenols, or chrysarobin. They are unsuited to medicaments which are soluble only in water or alcohol. Rubbed on a dry or scaling skin, these cerates leave the surface smooth, firm and flexible. They should not be used on a wet or exuding skin surface.

New Powerful Sweetening Agents

In Chemical and Engineering News *for November 10, 1946, it is reported that P. E. Verkade of Holland has discovered a new compound 4,000 times sweeter than sucrose. The new substance, sweetest of a series of compounds investigated during the war, is 1-n-propoxy-2-amino-4-nitrobenzene. It is now being manufactured in Holland and has been used successfully as a sweetening agent there and in several other European countries. U. S. patent applications have been filed.*

Relative sweetening powers of the series, as compared to that of 1 per cent sucrose solution, were listed by Verkade as follows:

1-Hydroxy-2-amino-4-nitrobenzene	**120**
1-Methoxy-2-amino-4-nitrobenzene	**220**
1-Ethoxy-2-amino-4-nitrobenzene	**350**
1-*n*-propoxy-2-amino-4-nitrobenzene	**4,100**
1-*n*-butoxy-2-amino-4-nitrobenzene	**1,000**
1-Isopropoxy-2-amino-4-nitrobenzene	**600**
1-Allyloxy-2-amino-4-nitrobenzene	**2,000**

In comparison, saccharin and dulcine, until recently the only synthetic sweetening agents used in practice, are only 200 to 700 times and 70 to 350 times as sweet as cane sugar while peryllartine, which is characterized as a perfume with a sweet taste, is 2,000 times as sweet as cane sugar. Compounds of the 1-alkoxy-1-amino-4-nitrobenzene series possess a purely sweet taste with no secondary or aftertaste such as is associated with certain other sweetening.

The n-propoxy compound, most important of the series as a sweetening agent, forms orange crystals and is easily obtained in a pure state. It is stable in boiling water and in weak acids—in contrast to saccharin—and has been shown to be harmless upon ingestion. Its solubility in water, however, is low—only 136 mg. per liter at 20° C., but a saturated solution is equivalent in sweetness to a 50 per cent sucrose solution. Despite its intense sweetness, it can be used as a sugar substitute if it is diluted with some suitable substance such as lactose to provide a product about 500 times as sweet as cane sugar.

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ADVANCING THERAPY

(*Continued from page 97*)

Penicillin in Root Therapy

Much has been learned and written about penicillin in the short time that it has been available for dental use. Its employment in Vincent's infection and other oral lesions has been studied rather widely. Its use in root therapy, however, has not been fully explored. Hence the importance of the report of G. G. Stewart (*J. Am. Dent. Assoc.* 33:1281, 1946) on his experience with penicillin in the treatment of 112 teeth. These included cases with necrotic or putrescent pulp, acute abscess, chronic abscess, granuloma, and pericemental abscess. These studies indicate that penicillin is a very effective and useful antibiotic in root therapy. It was found that higher concentrations of penicillin were more effective and gave more rapid results. The optimum number of units, as indicated in this series, would be approximately 10,000 Oxford units for each tooth treatment. Negative cultures were usually obtained after two or three tooth treatments. Stewart notes that the low cytotoxicity of penicillin allows for more rapid bone generation. Thus, since penicillin does not destroy the blood elements, repair may begin immediately, even in its presence.

Evaluation of Antipyretics

In work reported by M. R. Warren and H. W. Werner (*J. Am. Pharm. Assoc.*, Scient. Ed. 35:257, 1946) the antipyretic activity of four well-known antipyretics has been evaluated against fever induced in rabbits by the subcutaneous administration of a purified pyrogen prepared from Proteus vulgaris. Aminopyrine, acetanilid, and acetylsalicylic acid in proper doses arrested temperature rises; and they caused febrile temperatures to return to normal or subnormal levels. Acetophenetidin arrested the temperature increase, but it did not reduce febrile temperatures to normal. Excessive doses of acetylsalicylic acid and acetophenetidin caused a loss of temperature control in some pyrogen-treated rabbits resulting in higher temperatures than those observed in pyrogen controls. Excessive doses of acetanilide produced depression, and similar amounts of aminopyrine were convulsant.

All compounds, excepting acetanilid, caused some mortality when administered to febrile rabbits in a dose of 800 mg./Kg. Data were not sufficient, however, to establish comparative acute toxicity of the compounds evaluated for antipyretic activity.

Powdered Blood Cells for Ulcer

At a meeting of the Minnesota Socitiey for Internal Medicine (through *Mod. Med.* 14:97, Oct. 1946), M. W. Anderson, N. W. Barker and T. H. Sheldon reported that healing is hastened in about half the patients with ischemic ulcers associated with thrombo-angiitis obliterans or arteriosclerosis obliterans by the topical application of powdered human blood cells. A few patients do not tolerate the powder and in some others healing proceeds at the same rate as with other treatment methods. The blood cell powder is dusted into the crater of the ulcer, or applied with a spatula, and covered with a dry sterile bandage. The bandage is changed and powder reapplied daily until the crust formed by the powder and the serum adheres to the ulcer. If the ulcer appears moist under the crust, the scab is removed and more powder applied. If the ulcer seems dry further treatment is not required.

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CHEMICAL ENGINEER for manufacturing and research of tooth paste, other cosmetics. If possible soaps, glycerine recovery or pharmaceutical preparations. Must have worked in large-scale factory. Interested in coming to Shanghai. State age, nationality, education, single or married, salary expected. Send experience in detail accompanied by photographic copies of references, diploma and recent photo to Post Office Box 1222, Shanghai, China.

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Dodge & Olcott, Inc....Insert facing 21
Dodge Cork Co....67
Dow Chemical Co....Insert facing 24
Dreyer, Inc., P. R....Insert between 80-81
Duche & Sons, T. M....120
Dunkel & Co., Inc., Paul A....106
du Pont de Nemours & Co., E. I...Insert facing 25
Durlin Corp....Insert between 32-33
Enjay Company, Inc....100
Eppenbach, Inc....90
Ertel Engineering Corp....92
Essential Aromatics Corp....6
Evans Chemetics, Inc....23
Ever Ready Label Corp....68
Exact Weight Scale Co....93
Fairmount Chemical Co....139
Felton Chemical Co., Inc....Insert between 16-17
Fezandie & Sperrle, Inc....136
Filter Paper Co....90
Fine Organics, Inc....126
Fine Chemical Co....122
Firmenich & Co., Inc....Insert facing 96
Florasynth Labs., Inc....Insert between 24-25
Food Research Laboratories, Inc....124
Foster-Forbes Glass Co....63
Franks Stearate Div., Witco Chem. Co....140
Fritzsche Bros....Insert between 104-105
Furlager Mfg. Co....74
Gardner-Richardson Co....Insert facing 89
General Drug Co....Insert facing 8
Givaudan-Delawanna, Inc....Insert between 8-9
Glorene Company....139
Greeff & Co., R. W....120
Gunning & Gunning....132
Hagerty Bros. & Co....94
Helfrich Labs., Inc....Insert between 24-25
Hema Drug Co., Inc....110
Herchelroth, J. Hilary....131
Heyden Chemical Corp....Insert between 80-81
Hinde & Dauch Paper Co....Insert between 64-65
Hoffmann-LaRoche, Inc....116
Hooker Electrochemical Co....5
Hormann & Co., F. R....92
House of Hollywood....110
Huisking & Co., Inc., Chas. L....98
Illinois Water Treatment Co....81
Industrial Chemical Sales....Cover 2
Inland Alkaloid Co....114
Innis-Speiden Co....Insert facing 13
Interchemical Corporation....102
Interstate Color Co., Inc....136
Intramed Co., Inc....115
Jelly & Co., Walter H....110
Kachurin Drug Co....118
Katz & Co., Dr. Alexander....6
Kelton Cosmetics Co....135
Kessler Chemical Co....Insert facing 9
Kiefer Machine Co., Karl....Insert facing 84
Kimble Glass Co....Insert facing 68
Kohnstamm & Co., H....31
Kolmar Laboratories....Insert facing 4
Koster-Keunen Mfg. Co., Inc....103
Kraft Foods Company....10
Lanaetex Products Sales Co....111
Lautier Fils....115
Leeben Chemical Co., Inc....139
Lemke & Co., B. L....8
Lueders & Co., George....16
Lusteroid Container Co....68
Magnus, Mabee & Reynard, Inc....3
Mallinckrodt Chemical Works....Insert facing 33
Malmstrom & Co., N. I....32
Maryland Glass Corp....Insert facing 88
Mathieu, Inc., Charles....108
Merck & Co., Inc....Insert facing 20
Merita, Inc....68
Metal Glass Products Co....91
Miranol Chemical Co., Inc....111
Monsanto Chemical Co...Insert facing 57; 29; 70
Moutet, J. Henri....134
M. R. M. Co....Insert facing 64
National Aniline & Chem. Co..Insert between 12-13
National Can Co....62
Naugatuck Aromatics....Insert facing 97
Neumann, Buslee & Wolfe, Inc....111
New England Collapsible Tube Co....1
New Jersey Zinc Co....133
N. Y. Quinine & Chemical Works....9
Norda Essential Oil & Chemical....17
Orbis Products Corp....30
Oxzyn Company....28
Package Machinery Co....54
Parento Co., Compagnie....Insert between 4-5
Paris Cosmetics, Inc....15
Parson Imports, M. W....106
Penick & Co., S. B....21
Pennsylvania Glass Products Co....78
Pennsylvania Refining Co....114
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Pfizer & Co., Inc., Chas....Cover 4
Pittsburgh Lectrodryer Corp....86
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Pneumatic Scale Corp., Ltd....Insert facing 85
Polak & Schwarz, Inc....139
Potdevin Machine Co....95
Powell & Co., Inc., John....118
Prentiss & Co., R. J....98
Private Label Cosmetic Co....Insert between 4-5
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Purocaine, Inc....128
Remus & Co., Inc., Edward....127
Richford Corp....95
Robert, Inc., Henri....25
Robinson Wagner Co....18
Rodgers Company, Inc., George G....94
Ross Co., A. H....Insert between 64-65
Roure-Dupont, Inc....11
Sanitary Soap Co....4
Santonine Company of America, Inc....98
Schimmel & Co., Inc....19
Seeley & Co., Inc....114
Seydel Chemical Co....136
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van Ameringen-Haebler, Inc..Insert between 20-21
Vanderbilt Co., R. T....137
Van Dyk & Co....Insert between 12-13
Verley & Co., Albert....Insert between 112-113
Vorac Company, The....124
Warner Brothers Co....Insert facing 16
Warwick Chemical Company....Insert facing 17
Welch, Holme & Clark, Inc....102
Weston International....Insert facing 73
Wigton-Abbott Corp....93
Will & Baumer Candle Co....108
Witco Chem. Co., Frank Stearate Div....140
Wolf & Co., Jacques....120
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